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MEDICAL DIAL

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A Monthly Record of Medicine and Surgery

VOLUME IV

January to December, 1902

J. W. MACDONALD M. D., F. R. C. S. E. Editor
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MASONIC TEMPLE, MINNEAPOLIS, MINN.

Dec. 31-1903

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MEDICAL DIAL

A Monthly Record of Medicine and Surgery

Published by MEDICAL DIAL COMPANY

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SUBSCRIPTION PRICE

United States, Canada and Mexico, per annum, in advance,	$1.00
Foreign Countries in the Postal Union, per annum, in advance,	1.50

N B. Matter for the reading pages should reach office of publication on the 20th of the preceding month and display advertising on the 25th, to insure attention.

Vol. IV MINNEAPOLIS, MINN., JANUARY, 1902 No. 1

PURE WATER FOR THE TWIN CITIES. There was a communication in the daily Times of the 14th of December from a party claiming to know something concerning the Mille Lacs lake water, and stating that the lake is shallow—only 95 feet at the deepest point—and that in summer there are dead fish and numerous insects about the shores. These statements conflict with those of other persons who have examined both the waters and the surrounding shores, and have recommended the water as pure, and suitable for safe domestic use for the cities of Minneapolis and St. Paul.

There is one fact that would seem to sustain the views of the party giving favorable mention of the water, and that is the supply taken from the Rum river for Anoka, which has proved satisfactory. Rum river is the only outlet of Mille Lacs lake, and its water on the way through thirty or forty miles of cultivated agricultural grounds, and enforced by other small streams from a like surrounding country, would not naturally, under these circumstances, be improved in its purity.

On page 209, volume 3, No. 9 of the Medical Dial, appeared an editorial concerning the water supply of the Twin Cities, and an investigation of Mille Lacs lake water recommended, and if the plans for its introduction were found feasible, it would settle the matter, and abolish the use of costly pumps, expensive filter beds, and other necessary expenses of fuel and help.

Prof. Winchell has recommended artesian wells for a supply. These would furnish pure water, but the pumping apparatus would still be necessary. If the water of the lake is proved to be pure, it would probably not be as hard as the water from artesian wells, and for that reason more desirable for domestic and other uses. By force of gravity alone all the power necessary for fire protection and other mechanical purposes would be fully met.

A party is now said to be making some investigation of the matter of expenses, etc., of the undertaking, and, if the result is considered favorable, some effort will be made to execute the plans in the near future.

Boston, with a population of some 500,000, about one-fourth more than the combined Twin Cities, has expended

$14,000,000 on its waterworks, and the investment is universally approved. This large expenditure was made necessary on account of the cost of condemned land, the building of artificial reservoirs, and other expenses to prevent pollution from streams, and sewerage of villages. Mille Lacs lake is here our reservoir already prepared, and we have only to tap and draw the water. The expense cannot be large if the work is done now—while the supply from artesian wells is estimated by Prof. Winchell at 25,000,000 gallons per diem, the supply from the lake, thirty miles long and seventeen miles wide, is practically inexhaustible, and there would be no necessity to economize in the sprinkling of lawns and streets.

*The Treatment of Pneumonia in Children.

By Georgina Grothan, M. D., St. Paul, Neb.

This subject has been chosen on account of the frequency of this disease and the often lamentable outcome due to its mismanagement. Not that the treatment of acute cropous pneumonia in children should differ strikingly from that in adults, but its diagnosis and termination have their own distinct characteristics.

This paper for practical purposes, as it concerns itself mostly with treatment, will make no special distinction between acute broncho and croupous pneumonia, remembering that during the first two years the great majority of cases, or 75 per cent according to Holt, of primary pneumonia is catarrhal, as also are secondary pneumonias following the infectious diseases throughout childhood. However, it has seemed that la grippe is an exception to this rule. After this disease most of the cases have been of the croupous variety; we find this, too, in the majority of primary cases after the age of three years. While the two forms of inflammation are separate and distinct, yet there are seen many cases which partake of the characters of both, and it is with difficulty that they may be classified. It is frequently seen that both varieties may be present in the same case at the same time. These mixed forms are observed during the second and third years, but after that and during the first year the types are more distinct and well marked. Throughout the latter part of winter and during the spring months, especially April, this disease is so frequent that when called to see a child suffering from high fever and rapid respiration, it is well to suspect pneumonia, altogether it must be understood that very little catarrhal affection of the respiratory tract should not be considered as such. During this time of year, when a child suffers from one or more convulsions, we should not be in too great haste to assure the parents that the child will be all right the next day, after administering an emetic and a purgative, but rather warn them that convulsions are very frequently the beginning of pneumonia, which may not manifest itself markedly for from twenty-four to seventy-two hours. Chills, or even a cold state, are seldom present in children as the initiatory symptoms of the disease, but, on the other hand, gastro-intestinal disturb-

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*Read before the Nebraska State Medical Society, Lincoln, Nebraska.

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ances are frequently observed, especially in infants. Sometimes tenderness over the abdomen and diarrhea, but more often nausea and vomiting, are the first indications of the disease. Cerebral symptoms, as before mentioned, are marked in many cases, more especially in lobar, less so in broncho-pneumonia. Late convulsions are more frequent in the latter disease, especially those cases complicating pertussis. Often the cerebral symptoms are so prominent that the child is treated for meningitis throughout the whole course of the disease without the true nature of the malady even being suspected.

We cannot in children as in adults, depend largely upon physical signs and symptoms for diagnosis, especially in the beginning; even cough may be slight or absent, in this respect resembling the pneumonia of old age. From this it is seen that we must depend largely, for diagnostic purposes, upon exclusion and generalization, rather than rely upon pathognomonic characteristics.

As to treatment of pneumonia in children, the first thing we should learn is to avoid too much medication, thereby lessening the patient's chances of recovery. For the sake of better understanding what we wish to accomplish it may be well to classify the treatment under different headings. The hygienic treatment is of first importance, although it almost invariably receives too little attention both from the physician and the attendants. While very little can be done for the disease, much can be done for the patient in the way of hygiene and careful nursing, many mild cases requiring no other treatment. The child should of course be placed in a large, well ventilated room where he does not come in contact with drafts and cold damp air. The patient should be kept in bed, no matter how mild the case. It is the practice of well meaning friends and curious neighbors to crowd the sick room, but as the patient needs all the oxygen that can be procured, this unnecessary vitiation of the air should positively be prohibited. One attendant is amply sufficient, and when not engaged, that one may better be in an adjoining room where the patient can be watched. A frequent change of position is necessary, no child being allowed to lie for any great length of time on the back; the bedclothing should be warm, but light.

As to local applications, if there is considerable pain in the beginning, it may often be relieved by the application of a mustard paste, but later in the disease it has been our practice to apply a flannel fitting well around the chest, saturated with equal parts of turpentine and lard, once or twice a day, and we have had no reason to regret the use of this simple remedy. Over this flannel should be placed a cotton jacket, covered with oiled silk or some impervious material. Some of the text-books, and even modern ones, recommend the application of hot flaxseed poultices. This practice must be looked upon as a relic which should long since have fallen into disuse, and especially so when such applications are made continuously.

During the first twenty-four or forty-eight hours, but a small quantity of food, if any, should be taken. Indeed, throughout the disease, less food and more water should be given. In many cases the food should be diluted and partly digested. This, too, must be given at regular intervals, never oftener than two hours, usually three to four hours apart. Milk is the best food, when it can be taken. In regard to medicinal treatment, certain fixed indications are required, and can usually be depended upon. In the first place it is well to remember that a number of very mild cases require very little medicine beyond the cleaning out of the gastro-intestinal tract and the maintenance of excretions.

The temperature, so long as it does not exceed 103½° or 104° has but little or no bad effect upon the patient and needs no special attention. Should, however, hyperpyrexia be a feature, that is, a temperature of 105° or over, it is best controlled by the application of cold to the head, and cold sponging, generally avoiding the application of water to the chest. In this day of coal-tar products their use in pneumonia cannot be too strongly condemned, and they are, to my mind, responsible for the majority of deaths occurring from primary pneumonia. This class of drugs interferes with oxygenation and elimination, produces fatty degeneration and granular cell destruction. This, together with their depressing effect upon every vital function, should place these anti-pyretics beyond the thought of administration in pneumonia.

When a case of pneumonia is seen early, the gastro-intestinal tract needs our first attention. This is best cleared out with small doses of mild chloride associated with an intestinal antiseptic, of which guaiacol carbonate is perhaps the best. In a disease of general infection like pneumonia, thorough elimination and entric antiseptics are of primary importance. For this purpose two remedies may and should be continued until recovery is well at hand. Salicylate of sodium, in rather small doses every two hours, for its cholagogue and antiseptic effect, and aromatic fluid extract of cascara sagrada, are the two drugs to which we refer. Over twelve hours should not pass without a free bowel evacuation. The use of normal salt enemata once or twice a day should not be neglected if bowles become sluggish in action.

The kidneys are next in importance. The irritation of these organs by concentrated urine loaded with toxines must be prevented by the free use of liquids and the administration of a non-objectionable diuretic. Here we have liquor ammonium acetatis, slightly alkaline, made fresh daily and good doses given every two hours. This is the remedy par excellence, and will never disappoint those who employ it. Spiritus etheris nitrosi is also sometimes indicated. Stimulants should in all cases be given from the first; or rather, the stimulant, which is strychnia sulphate, must be given first, last, and all the time, in rather small doses. To a child one year old 1-300 grain is administered every three or four hours, and oftener for a short period if needed. Later in the disease alcohol may possibly be combined with strychnia to bridge the patient over for a short time, but if strychnia has not been neglected, this will scarcely be necessary.

As for direct cardiac and respiratory stimulants, these, as a rule, are not needed. Should indications for their use be manifest reliable preparation of digitalis for the former and belladonna or atropia for the latter are about the only remedies of any avail.

Sudden cases of general collapse, which are apt to come on at any time in broncho-pneumonia, may be successfully combated by the use of strychnia and nitroglycerine hypodermatically. Sometimes nitrite of amyl for its almost instantaneous effect and the continuous use of inhalation of oxygen are indicated. The hot mustard bath is valuable in those cases of cardiac or respiratory failure with cyanosis, cold surface, rapid pulse, respiration, and extreme nervousness. The child is placed in the bath at a temperature of 100°F. and the temperature gradually raised to 105° or 110°, if desired. The bath should usually not be continued longer than ten minutes and repeated in an hour if thought necessary.

To combat nervous irritability and sleeplessness, the application of cold will suffice, even if temperature is not very high. Nervous symptoms may arise in the latter part of the disease from want of nourishment or from toxemia. In a case recently under my care two convulsions occurred after the temperature had become normal; patient had not regained consciousness and pulse was rapid and feeble. He was given bromide and chloral by rectal injection and placed in a hot mustard bath, which latter produced an almost immediate palliative effect.

Although late convulsions are an unfavorable symptom, indicating, as they do, toxemia, exhaustion, or the beginning of meningitis, this patient now is in a fair way to recovery.

For sleeplessness large doses of sodium bromide are preferred. Nothing has been said about expectorants, and they are mentioned simply to be condemned, as they derange the stomach and are more or less depressing. If cough is troublesome and painful, codeia sulphate is the best remedy because it does the least harm. Sometimes much good is accomplished by giving small doses often, as it allays the patient's pain and fear. It should, however, always be given sparingly and dispensed with as soon as possible. Complications very seldom arise under this treatment, hence will not be discussed. Cerebral complications must be met promptly by cold applications to the head, and mercurials. We must never neglect to be on the lookout for empyema, which of course requires surgical attention; its prompt evacuation under the use of local anesthesia is demanded. Abscess of the lungs sometimes occurs in young children as a result of pneumonia. Many, however, recover in time with a comparatively useful lung.

Under this treatment, of seventy-eight cases, of which record has been kept, one death occurred. The case was seen late, and it is our opinion that the patient was poulticed to death. To sum up, strychnia and alcohol as stimulants, mild chloride, sodium salicylate, and aromatic fluid extract of cascara sagrada as antiseptics and laxatives; freshly made and slightly alkaline liquor ammoniæ acetatis as a diuretic; cold applications to the head and cold sponging for fever and nervous irritability; codeia sulphate guardedly for pain and cough, and our mortality of the primary pneumonias in children will be almost nil.—The Medicus.

A Remedy Proposed for the Evil of Substitution.

By J. D. Williams, M. D., New York.

There can be no subject of more importance to physicians than the violation of their confidence on the part of a dishonest dispensing druggist. Law will not make a dishonest man honest, but the right law properly executed will prevent a criminal's further infliction of injury upon society. The requirements of a license to all druggists who dispense drugs or medicines, revocable upon the licensee's being convicted of substituting any ingredient drug or medicine other than, and in lieu or instead of, that specified in the prescription, order or request in writing, of any physician, would go a long way to aid in the matter of honestly filling prescriptions. Let the medical societies induce their respective State Legislatures to enact a law requiring such a license, with a simple and practical procedure for establishing the guilt and enforcing the penalty against infraction, and the practice of substitution would soon cease.

Let proceedings for revocation of license be before the court, board or officer empowered to issue the license, and be set in motion at the relation of either the Board of Health, a local medical society, or the purchaser upon whom the fraud and imposition had been done, or of the physician by whom the prescription or order was issued or given, or of any person, firm or corporation for whose brand or make of drug or medicine the substitution had been perpetrated. Let the licensing board, court or officer be empowered to issue citations, subpœnas for witnesses, to administer oaths, and be given all other requisite powers for duly trying the issues and revoking the license of the guilty.

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*Cirrhosis of the Liver.

By W. R. Lavender, M. D., Omaha, Neb.

An increase of fibrous tissue in the organs is an essential change in old age, yet in any individual a slight irritation will produce inflammatory change, ending in fibrosis.

Classification of cirrhosis at present is unsatisfactory, being based upon the morbid changes found in the tissues, and whether these changes occur primarily in the cellular elements or in the connective tissues is still doubtful. Experimental and clinical evidence as to obstruction of the bile-ducts being a primary causative factor in cirrhosis of the liver do not agree. Ligature of the left hepatic duct in the lower animals is followed by unilobular cirrhosis in the ligatured area. In obstructive jaundice, in congenital abscess, or in atresia of the common duct in children, there may be cirrhosis varying from a slight hyperplasia to a high degree, yet post-mortem findings prove that bilary obstruction in man does not result in a cirrhosis sufficient to give symptoms.

Etiology.—Three important causative factors have long been recognized in

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*Read before the Nebraska State Medical Society, Lincoln, Nebraska, May 7, 8, 9, 1901.

cirrhosis of the liver, viz., alcohol, syphlis and malaria. To these might be added toxic agents from the action of microorganic products, or from drugs acting through the circulation, either affecting directly the hepatic cell-elements or the connective tissues of the organ. Again, conditions producing or favoring an osmosis of bile from its natural channels into the lymph-spaces, where admixture with the circulating lymph renders this secretion more irritant, may produce an inflammatory action upon the tissues, causing hyperplasia; the final contraction of this may become the starting point of a considerable fibrosis.

Pathology of Alcoholic Cirrhosis.—Owing to the distribution of the pathological fibrous tissues in the organ it is named as follows: I. Multilobular.—Changes are around the main portal veins in the portal canals. II. Unilobular.—Changes are upon the small portal branches which approach each lobule from all points of its periphery.

I. Multilobular Form.—Macroscopical.—Organ at first is probably enlarged, highly fatty; later, it is often, but not always, reduced in size, weight is increased, and its shape is altered from the contraction of the newly-formed fibrous connective tissue, the capsule is thickened, and there may be adhesions to the diaphragm. The natural and cut surfaces are studded with nodules, from the size of a pinhead to a pea. Pressure of the new growth upon the portal vein and its branches cause a dilatation of the anastomotic branches of the portal and general venous system.

Microscopical.—Early inflammatory changes are found in the tracks of connective tissue supporting the ramifications of the portal veins throughout the whole organ, the portal canals being packed with leucocytes and proliferated connective tissue cells. The vessels at first are dilated, lated contracted; the new connective tissue also undergoes contraction. In some cases there is an apparent new formation of bile-ducts, and nodules of hepatic tissues are found in the trabeculæ if newly-formed connective tissue; these latter consist of many fused lobules. In advanced cases the liver-cells are degenerated, granular in appearance, some with pigment, nuclei are unstained, or subject to fatty infiltration. This interstitial change starts around the main branches of the portal vein, there being but slight evidence of cell degeneration and death of the hepatic elements from the toxic factor; the increase of fibrous tissue present is out of all proportion to the cellular death found. This new formation of fibrous tissue is not anemic. This is proven by its capability of being injected through the hepatic artery and its capillaries, thus explaining the slight functional interference present in cirrhosis.

II. Unilobular Form.—Macroscopical.—The organ is increased in size and weight, normal in shape, edges sharp, capsule thickened; the natural and cut surfaces are smooth; color, mottled brown and white; when jaundice is present, yellow, or olive brown; firm and hard to the touch, but not leathery.

Microscopical.—Uniform growth of new fibrous tissue enclosing, and in some places invading, a lobule from the periphery towards the center. This tissue is poor in nuclei, but shows a rich plexus of bile-ducts. Near the portal vein at the centre of the triangular interlobular space there are one or more localized irregular spaces lined with columnar epithelial cells. Near the margin of the lobule a series of smaller ducts is arranged around, or parallel with, the edge of the lobule, and from these other ducts pass at right angles toward, and apparently become continuous with, hepatic cell-columns. These ducts are lined with cubical cells, their lumen being packed with detached cells; these are complete vessels, as they can be injected from the hepatic ducts. Cornil claims they consist of biliary canaliculi, becoming apparent as the liver tissue recedes, and the epithelium of the extralobular ducts growing up into them forms this regular epithelial lining. Such an arrangement is also found in syphilitic scars and tubercle of the liver, and in the lymphoid masses present in leucocythemia.

Pathology of Syphilitic Cirrhosis. Acquired form.—Macroscopical.—Liver is studded more or less with gummata from the size of a pea to a walnut, or fused into masses which may involve large areas of the organ, and are found upon the surfaces or deep in its structure, but most frequently are situated at the junction of the right and left lobes. The organ may show slight puckering from scars, or great deformity, produced by changes of these gummata, or traversed in all directions by broad fibrous bands, surface irregular, or lobulated, capsules thickened, with adhesive bands to diaphragm.

Microscopical.—Involved areas undergo atrophy, the bulk of the liver tissue being unaltered, vessels free, and portal canals normal. The center of gumma is filled with caseous material, and surrounded by a zone of new connective tissue, short bands from which radiate into the surrounding liver tissue.

Hereditary Form.—Macroscopical.—The organ is uniformly enlarged, heavy and hard, appears structureless, and is liable to be mistaken for lardaceous liver; the natural and cut surfaces are smooth and bloodless; color, pale or reddish-gray.

Microscopical.—Whole organ is packed with formative cells and developing fibrous connective tissue, affecting the portal canals and invading the individual lobules separating both columns and individual cell-elements from each other.

Pathology of Malarial Cirrhosis.—Macroscopical.—Whole organ is enlarged from blood engorgement; color, dark-red; natural and cut surfaces smooth, bleed freely on section. There is very little contraction of the delicate connective tissue present.

Symptims of Cirrhosis of the liver.—In cirrhosis of the liver from any cause, the symptoms are similar from clinical observation, simply varying with the amount of pathological new formation present; yet there are some interesting differential diagnostic points between the two varieties of alcoholic cirrhosishosis.

Multilobular Form.—(1.) In the early stages disease may not be recognizable until pressure from contraction of the new growth occurs. Dyspepsia, with loss of appetite in the morning, nausea, vomiting, tongue coated, sense of heaviness or distension after meals, gaseous eructations, bowels irregular, costive or loose, conjunctiva occasionally yellow in color, a tendency to hemorrhoids. Later ascites, which is present in about 80 per cent. of the cases, fluid clear, straw color, alkaline reaction, specific gravity 1010 to 1015, containing from 0.4 to 2.0 proteid, sugar a trace. (2.) There is a passive hyperemia of the stomach and intestines, with a resultant persistent and constant catarrh of their mucosal coats. Hematemesis occurs from the general oozing of blood from the congested capillaries, or from ulceration and rupture of the varices formed in the cardiac end of the stomach. (3.) Digestion becomes more imperfect, with gastric fermentation, and flatus, bowel motions pale in color, diarrhea profuse, and at times uncontrollable.

(4.) Spleen enlarged and indurated, jaundice usually absent, urine diminished in quantity and loaded with urates, sometimes bile pigment present. Fever is usually absent, face pale, malar bones prominent, later in the case epistaxis, purpura, bleding from the gums, delirium, drowsiness, coma and death. Varices which occur are found at three points, viz: (1.) Plexus of veins, cardiac end of the stomach, anastomose, with a similar plexus at the lower end of the esophagus, and open into the azygos veins. (2.) One or more small par-umbilical veins, constantly found, pass from the left division of portal vein, in the round ligament accompanying the obliterated umbilical vein to the umbilicus, communicate with the epigastric system. (3.) Communication between inferior mesenteric and hemorrhoidal veins. Diagnostic points in connection with the communicating veins: a net-work of dilated superficial veins around the umbilicus; a continuous venous murmur immediately below ensiform cartilage; formation of hemorrhoids.

Unilobular Form.—Tendency to severe jaundice, with little or no evidence of portal obstruction, the disease usually well advanced before some sudden illness causese the patient to seek advice, when an enlarged lived is found. Early symptoms, some general failure of health, slight weakness, loss of appetite, sense of weight in right hypochondrium, jaundice present sooner or later, but is occasionally absent; when present, it is intense and persistent until death. Spleen normal, or slightly enlarged; liver enlarged, hard, smooth, and easily palpated, filling up more or less a large part of the abdominal cavity; ascites absent, or very slight; no direct or indirect evidence of portal obstruction, hematemesis or varices. There is often present an evening rise of temperature (an important sign), 102 to 104 F., which may follow a hectic course similar to an hepatic abscess. The urine and urea diminish; leucin and tyrosin may be found. Diarrhea is common and uncontrollable near the end. Temperature rises, followed by progressive feebleness and emaciation; tongue becomes dry, pulse rapid, petechiae of skin appear, coma and death, the latter is often sudden.

Symptoms of Syphilitic Cirrhosis.—Acquired form.—If disease is extensive and changes in gummata pronounced, inequalities upon surface of the organ may be palpated through abdominal walls; later all the pressure and other symptoms found in alcoholic form of cirrhosis are present. In mild cases the general health is only slightly disturbed. There may be a sensation of weight in the right hypochondrium and some pain.

Treatment.—No general plan can be laid down. Each case must be treated for conditions present. In administration of drugs care must be observed in case of their effect upon the cellular elements. Marckwald's investigation upon frogs, rabbits, etc., proved that frequent injections of small amounts of antipyrin produced cirrhosis of the liver, and injections of large amounts of the same drugs caused acute destruction in the organ. Regulate the daily life of patient; plenty of fresh air; moderate exercise; milk three to five pints daily, diluted with an alkaline water; white meat or fish in small quantities; vegetables or fruit without much starch. Mild preparations of iron, acids, and bitter tonics. Stomach irritability, bismuth, etc. Flatulence, thymol. Diarrhea, subnitrate, or salicylate bismuth. Hematemesis, absolute rest of body, stomach and esophagus—feeding by rectum. Ascites, paracentesis, especially when upward pressure upon lungs is present.

Aids to diagnosis.—Urinalysis, with microscopical investigation of sediment, is essential to differentiate albuminuria from simple pressure of ascitic fluid upon renal veins, from that of a co-existent nephritis. Blood examinations are not reliable, the bile present in the blood interferring with a correct hemoglobin estimation; the leucocytic diagnosis being of little use, except perhaps in the so-called hypertropic cirrhosis with jaundice.—Western Med. Rev.

The Influence of Nicotine on Ganglion Cells: Its Bearing on the Pathology of Tobacco-Amblyopia.

By Herbert Fisher, M. B., B. S., London.

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So far ,as I know, the attention of ophthalmologists has not been particularly drawn to some experimental work by Professor Langley, on the influence of nicotin and certain other drugs on the activity of ganglionic nerve cells. This work was performed some years ago, and the facts are by now well established; the results of his physiological experiments were first reported in the Transactions of the Royal Society, and in the Journal of Physiology. Professor Langley proved to complete satisfaction that in the rabbit, cat, or dog, if nicotin be injected into a vein, electrical stimulation of the cervical sympathetic on the proximal side of the superior cervical ganglion failed to produce any secretion of saliva; the same negative result followed the application of the electrodes to the ganglion itself, but if the stimulus were applied to the nerve fibres between the ganglion and the gland, the gland cells at once actively secreted. This experiment suggested that the interference in the passage of the secretory impulses as the result of nicotin toxæmia, was in the ganglion cells themselves; that this inference was correct was then conclusively proved by exactly the same series of results being obtained when the superior cervical sympathetic ganglion was merely exposed and painted with a solution of nicotin, no injection of the drug being made; when the nerve cord, instead of the ganglion, was similarly painted with nicotin no interference with the passage of the stimuli took place. A similar series of experiments showed that in these animals nicotin inhibited the passage of secretory impulses through the gangilon cells placed on the course of the chorda tympani nerve. A further investigation was made on the splanchnic nerves, stimulation of which, under normal conditions, at once inhibits peristaltic movements of the bowel and stomach; here again after the exhibition of nicotin the splanchnics, when stimulated, failed to arrest these movements, and the experiments conclusively proved that the impulses thrown into the splanchnic nerve fibres, failed to traverse the cells of the ganglion of the solar plexus.

Professor Langley has further proved that in an animal under the influence of nicotin the cells of ciliary ganglion form a "fault" in the transmission of impulses to the sphincter pupilæ, and the superior cervical sympathetic ganglion cells an obstacle in the path of stimuli to dilate the pupil. He has also extended the same series of observations to nerve fibrils which end by means of ganglionic connections in voluntary muscles, using the extra-ocular muscles for this demonstration. Similar results were obtained as regards the vaso-motor nerves. In every instance, when the animal was under the influence of nicotin injected into a vein, a stimulus applied on the proximal side of a ganglion, or on the ganglion itself, failed to produce any result, while the same stimulus applied to nerve fibres connecting the ganglion and its work, was as efficacious as if no nicotin had been employed; in every instance the exper iments produced identical results when, without intravenous injection, the appropriate ganglion was exposed and its surface painted with a solution of nicotin.

Nerve impulses, then, whether motor to striped or unstriped muscle, secretory, vaso-motor, or inhibitory, are arrested in an animal under nicotin, if and only if, they have to traverse ganglion cells; this fact is so certain that Professor Langley now, when experimenting, if he wishes to know if impulses are transmitted along nerve fibres direct, or only by synapse through cells of a ganglion, repeats any experiment he may be making first injecting the animal with nicotin; if the impulses now, of whatever nature, fail to pass, he is sure ganglion cells are in the path.

It occurs to me that these well demonstrated facts should be of interest to ophthalmologists in regard to the cases of chronic poisoning with nicotin which we know as tobacco-amblyopia. Up to now we have regarded these cases as examples of retro-bulbar neuritis, but I doubt if anyone is conscientiously satisfied who nicotin affects the papillo macular bundle alone of all the fibres of the optic nerve. If it be fair to extend Langley's results to the specialized impulses which the optic nerves convey from their end organs to the brain, we should infer that the impulses originated in the macular cones reach the brain only after transmission through ganglion cells, while those started in more peripheral parts of the retina pass without such interruption along more direct nerve fibres. For myself, I am not inclined to think there is any real reason why what has already been shown to apply to impulses of very different characters, should not also be true of visual impulses. The optic nerve is susceptible to electrical and mechanical stimuli, and if it be argued that it is not comparable to a peripheral nerve, but is developmentally a part of the central nervous system, I think we have now advanced beyond such coarse anatomical distinction when we regard each nerve cell as a neuron, and each nerve fibre as the axon of such a cell, and all nerve matter to be built up from these two rudiments. Moreover, Schafer has no hesitation in making Langley's results applicable to the central nervous system.

In vol. ii. of his recent "Physiology" he says: "The effect of drugs in diminishing or increasing the resistance of the nerve centers to the passage of nervous impulses may be produced in the same way," i.e., by interference in the synapses, possibly by alteration of the nerve cell processes diminishing or increasing the intervals. "It appears certain that nicotin, in blocking the passage of nervous impulses along a nerve path, acts on the synapses. This conjecture opens up a wide field of speculation, since it is possible to extend it so as to embrace the explanation of many physiological and psychical conditions. Lepine has invoked it to explain the production of both natural and hypnotic sleep."

Do the nerve impulses of the macular region, then, pass through nerve cells en route for the cerebral cortex, and do those of more peripheral parts of the retina not do so? At first sight we might be inclined to look for such ganglion cells in the path, in the external geniculate body, pulvinar or anterior corpus quadrigminum; but at this distance from the retina the macular bundle can no longer be identified among the fibres of the opitc tract ; nerve cells are of course found in these grey nuclei, but what their connections are is uncertain; Wernicke considers that some fibres, the so-called fibrillary bundle, do pass direct to the occipital cortex through the posterior part of the internal capsule without relation to the primary optic ganglia, and it may be that all do so without relationship to the cells of the basal grey matter among which they thread their way. I do not think, however, it would be here that we should expect to find the impulses checked in ganglion cells by nicotin; the changes in the optic nerve, in cases of tobacco-amblyopia, have been sufficiently proved by Nettleship and many others, and are universally recognized; all, however, do admit that they indicate a partial interstitial neuritis; and whatever their nature, it does not follow that these changes in a sector only of the optic nerve, so difficult to explain as the result of a general toxæmia, are the only or even the primary change; but seeing that changes tending towards, or indicative of, an atrophy of afferent fibres are found in the optic nerve. we should naturally look on the peripheral side of this lesion for the primary change. That there are ganglion cells between the rod and cone and nerve fibre layers of the retina we all know. Dr. Gaskell, in a recent communication to the Anatomical Society, comparing the simple retina of some of the lower animals with the compound retina of vertebrata, pointed out that each develops in contact with a portion of the brain which forms the primary optic ganglion; in both classes the brain subsequently withdraws from the surface; in animals with a simple retina (e.g., the arachnida), the whole optic ganglion withdraws, leaving behind a simple retina connected to it by the optic nerve, while in the vertebrata the line of cleavage is diffenent; a part of the primary optic ganglion remains attached to the primitive retina and renders it compound, while the remainder withdraws with the brain, again connected to the retina by an optic nerve composed of the elongated proceses of the nerve cells left behind; this part of the optic ganglion left fused with the primitive retina Professor Gaskell terms the "retinal ganglion," and he considers it to be represented by the inner molecular and ganglionic layers.

If it be proved that the majority of the impulses aroused in the cones of the macular region pass through ganglion cells in their transmission to the cerebral cortex, while those originated in peripheral parts of the retina do not, or if there be one more synapse to be traversed by the macular impulses than by the peripheral impulses, it seems to me that in the light of Professor Langley's results we have for the first time a satisfactory explanation of the central scotoma which is the characteristic feature of tobacco-amblyopia.

In favor of the existence of this difference in the paths, I will point to the following observations:—

In Quain's "Anatomy," vol. iii., part 3, we find: "Most of the nerve fibres are continuous with the axis cylinder processes of the cells of the next layer, but some are continued through the second and third layers and end by ramifying either in the inner molecular layer or amongst the elements of the fourth layer (inner granules), the terminations being frequently knobbed or enlarged."

Sir Michael Foster, in his "Text-book of Physiology," vol iv., says: "We can trace optic fibres through, or apart from, the ganglionic cells to the inner molecular layer, and there we lose them too."

There are, then, fibres of the optic nerve which are not the axons of cells of the ganglionic layer. To confirm this I have endeavored to find an estimate of the total number of cells composing the ganglion layer of the human retina so as to be able to compare this figure with the estimated number of fibres in the optic nerve. I can find no figures as to the number of ganglion cells. According to Krause, in the optic nerve there are 400,000 broad and as many narrow fibres, so that for every fibre there are 7 cones, about 100 rods, and 7 pigment cells. I have failed to find any estimate of the number of ganglion cells in the macular region of the retina; we know that the fibres of the macular bundle amount to about one-fourth of the total number in the optic nerve; we know also that at the margin of the fovea the ganglion cells are closely packed in layers, nine to ten deep, while a little farther from the central region they form a single layer, and towards the periphery these cells are separated by considerable intervals one from another. This arrangement seems very suggestive that every impulse originated in a macular cone is transmitted through a ganglion cell to the axon of that cell, while more peripherally where we have at least 100 rods and 7 cones to one nerve fibre and the ganglion cells form only a very incomplete single layer, it is obvious that many rods and cones, if they initiate impulses, must forward them, so to speak, in packets to a single nerve fibre, and must do so, for the most part, without transmission through a ganglion cell; the ganglion cells here must surely be fewer than the nerve fibres.

In Fuch's "Text-book of Ophthalmology," p. 403, I find, "The part of the retina which is the most completely equipped for vision is the fovea centralis —within it, the terminal elements, which here are exclusively cones, are more densely set than in any other part of the retina. Each one of them has probably a special nerve fibre all to itself which connects it with the brain, while in the peripheral part of the retina it is always the case that several terminal organs are conjointly continuous with one single nerve fibre."

It has been argued by more than one observer that the primary change in tobacco-amblyopia is in the cells of the ganglion layer, but some of my readers may possibly have overlooked this theory, and I feel sure the majority are so imbued with the view that these cases are due to a partial retrobulbar neuritis, that they have attributed little importance to the alternative explanation.

De Schweinitz, in vol. iv. of Norris and Oliver's "Disaeses of the Eye," writes: "Another explanation is suggested by the theory—now receiving histological proof—that the earliest lesions in intoxication-amblyopia are to be found in the ganglion cells of the retina and in thenerve fibre layer. It is readily conceivable that the macular ganglion cells may suffer from a lesion sufficient to cause visual disturbance, which disappears, with consequent improvement in acuity of sight, under the influence of rest, improved hygiene, &c., precisely as we know that the constitution of ganglion cells elsewhere in the body is demonstrably structurally different after enforced exercise and electrical stimulation from what it is after rest. If improper stimulation is long continued, permanent lesions are established in these cells. So also if the influence of the toxic agent is exerted for undue periods of time, degeneration of the macular ganglion cells ensues, together with secondary changes in the optic nerve."

Nuel has especially contended for the retinal origin of the symptoms and pathological changes in cases of tobacco-amblyopia; to quote de Schweinitz again:—

"Recently Nuel has contended that the central toxic scotoma is not primarily the result of a neuritis of the macular bundles, but of a disease of the macula lutea, causing degeneration of its cells, and that the optic nerve changes are secondary to destruction of the nerve cells of the macula. He bases his views on microscopical examination of a specimen in which the ganglion cells were atrophied. * * * There is no doubt that there may be a retinal origin of degeneration of the papillo-macular bundle, or, indeed, of more extensive disease of the entire nerve, and clinically we know that in atrophic central retinochoroïditis, or in so-called macular coloboma, there will be a quadrant atrophy of the optic nerve, precisely as this is seen in cases of intoxication-amblyopia. * * * * Ophthalmoscopically, changes in the macula have been described, although they were not attributed to the influence of the toxic agent. Sachs and the author have carefully examined the ganglion cells of the macula in cases of toxic amblyopia and found them normal, or at least, only slightly changed, although the entire macular tract was atrophied, but their investigations were made with the ordinary histological methods, and before the Nissl stain was known. Hence their value is indifferent. In Widmark's case the nerve fibre layer between the macula and papilla was thinner than normal, and the ganglion cells somewhat less numerous."

Nuel's work is reported in the Arch. d'Ophthalmologie, 1896; the changes in the ganglion cells he describes were very marked and unmistakable; in large part the cells had completely disappeared, and those remaining were shrunken and atrophic. I have myself, under care at the present time, a patient recovering from tobacco-amblyopia who presents quite obvious faint macular change in each eye. Most definite changes in the ganglion cells of the retina have been pathologically found, and figured by Holden in cases of quinine-amblyopia, and proved to be the primary lesion in this form of toxæmia, followed at a later date only by obvious changes in the fibres of the optic nerve.

I am aware, therefore, that I am not putting forward an altogether new view of tobacco-amblyopia; what I have endeavored to adduce are some new arguments based on proved physiological experiments in favor of the view which at present obtains the assent only of the minority; with Professor Langley's work as a basis, to argue that the central amblyopia in nicotin poisoning is due to an interruption in the transmission of those impulses which have to pass through the ganglion cells upon which the alkaloid acts, and to point to some histological facts which, if this view is admitted, will enable us to explain more satisfactorily than hitherto why direct vision suffers out of all proportion to indirect vision in tobacco-amblyopia.—Opthalmic Review.

Vesical Calculus in a Woman Aged Seventy-five Years; Operation; Recovery.

By C. Ballard, M. D.

A. W., aged seventy-five years, has frequently been to consult me during the last year or two for difficulties in micturition. A little simple medicine has generally given her relief, but during the past summer her symptoms became more troublesome, and she thought her sufferings arose from a falling of the womb. On examination the womb was found to be quite without fault; but the urine was full of mucous and blood shreds. I then suspected stone, which diagnosis, on passing a silver catheter, proved correct. I suggested an immediate operation, and the patient willingly consented.

The stones, four or five in number, with detritus were extracted by the urethra; some slight febrile disturbance ensued, and lasted three or four days. Some incontinence of urine (from laceration of the urethra) lasting ten or twelve days. The calculi must have been in the bladder for years, and the constant irritation of the mucous coat had produced an effusion of mucous, almost pustular in appearance, mixed with blood. In three weeks (so much vitality and recuperative power did this old lady possess) she was quite well, the urine had become normal, the incontinence was almost gone, and sleep and appetite were restored.—N. Y. Lancet.

Medical Practice Among the Caroline Islanders.

By Rev. Edward E. Hyde, M. D., Ruk, Caroline Islands.

The practice of medicine among uncivilized people is very different from that in which most of your readers are engaged. The physician here can neither count on a good history nor compliance with his orders. To be able to depend a little on the replies of the patient requires one to sharpen his senses and train them in every means of physical diagnosis.

The Caroline Islands, be it said in preface, are all small, most of them of coral formation, and lie a few degrees north of the equator. and south of Guam. The large islands are of basalt, rising abruptly from the sea, covered with stones, which in turn are concealed with a dense growth of vegetation. Some islands reach a height of over a thousand feet, although not more than four or five miles across. The inhabitants are a brown race, like the Samoans or Hawaiians, but somewhat inferior to them in intelligence.

The chief products are cocoanuts, bread fruit, arrowroot, and bananas. Fruit is abundant, including the papaia, These are very common here, and we eat them for breakfast in place of muskmelons, from which they differ but little. The bread fruit is the common food of the people. It is like potato and like bread. They preserve it in cellars for months, although to foreigners' noses it seems anything but preserved. When it is too old and rotten it may give them pain, as will also the rotten fish, of which they are very fond. The rarity of ptomaine poisoning astonishes me. The human body must have a wonderful power of accommodation.

One of the most common calls for medicine is stomach ache, for which the native word means "pain in the middle." I must differentiate between pleurisy, neuralgia, worms, constipation, diarrhœa and colic, besides the rarer causes. Two of the latter, recently, were syphilis of the end of the breastbone and orchitis. In the latter the man modestly omitted to speak of his principal pain. As a rule these people classify their sickness by the most troublesome symptom, which in many cases is pain. They often ask for medicine without expecting to tell their symptoms. This may be because they know little of medicine or disease, and perhaps because some tribes have witch doctors. I suppose an incantation suffices as well for one disease as another, and saves the trouble of inquiring into symptoms.

But there is sense in some of their practices. Massage is very common, and is used with some degree of skill. The use of hot stones to burn out old syphilitic ulcers and to kill ringworm may be mentioned. I have little call for treatment of the teeth. The natives clean their teeth after they eat, sometimes using a wisp of the cocoanut's fibrous husk. Their teeth are, for the most part, in very good condition.

Eating such food as I have described, and drinking from surface pools, the Caroline Islanders naturally are exceedingly afflicted with worms. Coughs, colds, pleurisy and rheumatism are also commonly caused by exposure. Although such a hot climate, it is dangerous to get wet and then sleep in the wind and they often pay the penalty for doing so.

A number of cases of elephantiasis may be seen. One was as bad as the examples in "Parke's Surgery," and nearly equal to the plate in Fox's "Diseases of the Skin." I have seen the typic rupia of syphilis, such as I never saw in the States. Syphilis was introduced long ago by the traders, and the promiscuous relations of the people have spread it until the whole race is syphilized. There is now some immunity. The most common manifestation is in the ulcers on the babies. Some children cannot offer the doctor a spot on their bodies where he can put his finger without touching a sore. A man who brings us fish occasionally has a hole in his face in place of his nose, and there are many other hideous deformities among the people. Some of these cases seem to be hungry for mercury, if one might judge from the rapid improvement under its use.

This is a mission of the American Board. The chief work here is to train natives who will teach their people, and to assist them in that labor. The natives are bright and cheerful, and are an agreeable people to work among.—Med. Council.

Don'ts in Twentieth Century Surgery.

By Lucien Lofton, A. B., M. D., Emporia, Va.

(1). Don't probe for a ball. Nature will find it.

(2). Don't cut away any integument. Scraps make mighty nice job lots in the end.

(3). Don't destroy a piece of bone, if tissue to cover it is obtainable.

(4). Don't deny nature a chance to assert her rights.

(5). Don't let several fingers and toes lie on the ground to perish. Stitch them in place; try moist antiseptic dressing and watch results.

(6). Don't forget that blood clots will replace expended superficial and deep structures, even nerves, veins, arteries and bones—when properly used.

(7). Don't hurt a patient who is already hurt.

(8). Don't attempt any operation without a full knowledge of the anatomic surroundings.

(9). Don't waste time while operating. Remember Davy Crocket's axiom however.

(10). Don't believe minor operations are not as dangerous as major ones. The prick of a pin has laid many low.

(11). Don't use the knife if you can use anything else. Good judgment is ofttimes better than good cutting.

(12). Don't meddle with your surgical cases. Good eye sight, tactile sensation and an acute olfactory sense are prime requisites to surgical success.

(13). Don't trust your surgical cases to any one. It is better for you and your patient to know each other intimately from start to finish.

(14). Don't operate on credit. Let it be straightout cash or pure charity.

(15). Don't go mad over antisepsis. Operations in hovels have made some surgeons famous, and mortality almost a myth.

(16). Don't forget, however, that the doctor can be a surgeon under all circumstances.

(17). Don't send your operable cases away. If you need help get it.

(18). Don't attempt an inoperable case. Let the patient know the facts. Truthfulness is next to Godliness.

(19). Don't use dull instruments or rotten ligatures. You lose your temper in the first instance, and the patient might lose his life in the second.

(20). Don't forget to always personally examine the organs of the thoracic and abdominal cavities closely.

(21). Don't tell patients too much surgery. Graduates are not made in a day.

(22). Don't criticize any man's work. A silent tongue is better than a glass house.

(23). Don't do surgery under contract. Let no man hamper your head or your hands.

(24). Don't forget that a poverty-stricken wretch is entitled to the same surgical consideration you would give a potentate.

(25). Don't lose your head. You want it in the right place when a scalpel is in your hand.

(26). Don't waver over unfortunate results. If you would save all, there would be too much demand for your services.

(27). Don't borrow too much of the other fellow's thunder. When you can, pay all you have borrowed. You might make some yourself, if you would persevere.

(28). Don't wash a granulating sore. You tear down what nature is trying to build up.

(29). Don't fail to do your own operation, if you can't do the other fellow's.

(30). Don't tell a patient you saved his life. Let him do that.

(31). Don't use too much alcohol in your surgical practice. It is a treacherous article in both health and disease.

(32). Don't permit a nurse to be the attending physician. She has her place and should know it.

(33). Don't call every enlargement a tumor. Give it some definite name. The growth might rebel.

(34). Don't try to look "owly." Patients are not always dazed by pomposity.

(35). Don't attempt more than thirty operations per day! Your health will give way under too great pressure.

(36). Don't try to remember all of these "don'ts." Take your pick! They might help you across a stream—and not change horses at that.—Am. Surg. and Gyn.

Eddyism, or "Science and Health" vs. The Scriptures.

By Rev. W. B. Riley, Pastor First Baptist Church, Minneapolis.

A Sermon Delivered Sunday Evening, Dec. 8, 1901.

"I marvel that ye are so soon removed from him that called you into the grace of Christ unto another gospel; which is not another; but there be some that trouble you, and would pervert the gospel of Christ. But though we, or an angel from heaven, preach any other gospel unto you than that ye have received, let him be accursed. As we said before, so say I now again, If any man preach any other gospel unto you than that ye have received, let him be accursed."—Galatians 1:6-9.

The subject of the present series of sermons, "Isms Patent and Popular," certainly includes the general subject of Christian Science. There are few newly-formed faiths which have made themselves so conspicuous these last days as has Christian Science, while its popularity is evidenced, in that it has grown, within the life-time of its authoress, from a conception of her mind to a denomination well nigh a million strong.

In our own city of Minneapolis it is illustrating daily, both its conspicuity and its ability to make converts. In the five years of my residence here, I have found more references to this cult in the daily newspapers than to any one of the greater denominations whose ministers and churches have helped to make the city what it is. I am candid in the opinion that for two years past the daily press has printed more on the subject of Christian Science than it has published in behalf of the entire one hundred evangelical churches, of which this city has just reason to be proud. Whether our editors are semi-converts to this "so-called science"; or, whether some well-to-do citizens have had sufficient influence at the editor's office; or, whether these addresses have appeared as ads., paid for by line, the fact remains that they have appeared with increasing regularity. Now almost every week entire columns are accorded expositors of Christian Science.

Five years ago the Minneapolis followers of Mrs. Eddy, when they met at all, were found in some hall or private residence, and their notice of services had the sound of some passing fad of faith. To-day, the First Church, a temple of some pretensions and beauty, no longer meets the demand of their multitudes; the second sanctuary, far more spacious and splendid, is in the process of erection, and is centrally located. It is claimed for the congregation that awaits its completion, that they well nigh fill the Lyceum Theatre on the Sabbath, and recently rented the Unitarian church that they might make larger room for their mid-week meetings.

All of this suggests to me, two or three things, namely—that this is not an Ism of such ephemeral tharacter that only fools find it necessary to speak against it; that this is not a cult that can be laughed out of court; and, so far as I am concerned, the attempt to legislate it out of existence is a piece of religious intolerance that I do not believe the increasing intelligence of the 20th Century will continue to tolerate. In consonance with our discourse on Liberalism, I want to repeat that Christ does not care for conquest by coercion. His truth is in no need of such assistance; it contains in itself every element of victory; and the man who resorts to any other method than teaching it, proves himself its enemy. "To the law and to the testimony, if they speak not according to this Word it is because there is no light in them." Isaiah, 8:20.

That is the test for this Ism, and by that test, I am willing to measure swords with Christian Science; to see my Faith stand or fall, according as it is supported or opposed by the Word of God.

The first thing to which I invite your attention, therefore, is,

CHRISTIAN SCIENCE AND THE SCRIPTURE.

When I speak of "Christian Science and the Scripture", I am purposely employing the phrase. There are points of parellelism between "Science and Health" and the Scriptures, which are evident to the intelligent reader, and which ought to be admitted by the man who poses as fair-minded. To give attention to all of these would require more time than is now at our command. But to three or four of the most fundamental points of parallelism we do well to contribute some study.

Christian Science emphasizes the idea—"*God is love.*" I have yet to read the book by Mrs. Eddy in which this phrase does not occur very often. It really characterizes her volume, "Science and Health with a Key to the Scriptures." It has a somewhat prominent place in her "Miscellaneous Writings—1883-1896." And in the little handbook "Yes and No" she repeats again, "God is Love." In no one of these is she willing to let the sentence of the apostle pass without improvement, always taking pains to explain, "Love is principle, not person."

But, for the present, let us pass over her explanation and remember that she is at least faithful in her quotation—"God is love." Somehow or other I feel drawn to the individual who emphasizes that fact; to the denomination that gives it prominence. It is a truth the whole world needs to know. Joseph Parker put it beautifully when he said, "'God is love' is the inclusive proposition—it is the encyclopaedia of doctrine; it is the secret of the universe. Creation is there, and providence, and redemption. That legend blooms in every flower and glows in every star; and it is working its way through all sin and pain and tears, and will work until in a sanctified humanity and in a reconciled universe it interprets and crowns the purpose of the cross."

Again, Christian Science lays stress *upon self-mastery.* The old stoics taught men to endure pain without a cry, and be commended them when they were able to do the same and keep a placid countenance. Christian Science goes even beyond this and insists that there is no pain. Mrs. Eddy says, "Disease arises from a false and material sense, from the belief that matter has sensation. Therefore, this material sense, which is untrue, is of necessity unreal." ("No and Yes," p. 13.)

And what it teaches concerning disease it says concerning every other form of sorrow or of pain. There is no man living who would ever reach such a conclusion as this until his thinking had been distorted by teaching at once unscientific and unscriptural. And yet, as a product of this denial of bodily ills and mental ailments, "Christian Scientists are noted for peace, sweetness, humility, patience and abounding love." Unbiblical as is the basis of this teaching, the behavior coming from it is akin to that commended by the Sacred Scripture, only differing in its source. The prophet said of God, "Thou wilt keep him in perfect peace whose mind is staid on Thee." David wrote, "Serve the Lord with gladness." Christ affirmed, "He that humbleth himself shall be exalted." And the same Master taught, "In your patience possess ye your souls"; while His apostle said, "Ye have need of patience after that ye have done the will of God, that ye might receive the Promise." (Hebrews, 10:36.)

No man having read John's first epistle can forget the prominence he there gives to the doctrine of brotherly love, affirming that it is the one evidence that we "are of the truth"; that we "are born of God." When Paul wrote to the Corinthians "I keep under my body and bring it into subjection, lest that by any means, when I have preached to others, I myself should be a castaway," he was affirming the necessity of self-mastery. And when we find that necessity met, even though it be in the character of a Christian Scientist, let us consent that whatever his precept may be, his practice is after the pattern, that comes down from the mount.

R. F. Horton says. "Like a water-plant which grows in the ooze of the river-bed but only flowers when it gets above the surface into the upper air, we are so made that until we get above ourselves, above our surroundings, and penetrate victoriously into the love of God, there is no blossom or flower, no right love for men, no wholesome occupation with the things of sense and time."

Christian Science has honored *the doctrine of Divine healing.* To be true they have associated it with some statements that are at once abstruse and unbiblical, making the healing a result of corrected opinion rather than a compassionate act of an all-powerful God; and yet, in teaching it at all, they have turned the attention of an unbelieving world, and a faithless church, to a long neglected Scripture truth. And when A. A. Sulcer, Doctor of medicine, and Christian Scientist, says, "The gift of healing was lost, not because it was especially granted for the special epoch, and then denied to those of later times; but because the power of the ministry —the Christ power—was lost", he uttered what is abundantly illustrated in history. When he continued, "Restore the one and the other is restored; separated they cannot be; neither can that power be denied without limiting one of the Divinely given tests, not merely of discipleship but of 'them that believe.' It proved the truth and divinity of the message then; and it proves the truth and divinity of the message now", he reached the very same conclusions to which Dr. A. J. Gordon came, through the study of the Scriptures themselves; and to which I believe any unprejudiced mind would come were the Holy Ghost to become teacher, and the Bible text book. One of the wisest things our Baptist people ever did, in the way of properly instructing people concerning Baptism, was to collate all the texts of Scripture referring to that ordinance, and publish them *verbatim,* and without comment. The greater doctrines of the Word of God will not be in dispute when men dispense with their prejudices and go about seeing what the Scripture saith.

Twice recently I have gone into homes to find there text books on Divine healing, arranged and printed by Christian Scientists in which a multitude of Scripture passages, touching the subject of divine healing, were printed without comment. In each instance I said, "If Christian Science will keep to this custom of letting God speak for Himself, and His Word teach its own truths, whoever will may oppose them, but I will not be found among the number." There may be those who can *explain away* the hundred and one texts, and more, that teach this doctrine, but is not the *practice* of the Word preferable? So long as Jehovah declares "I am the Lord that healeth thee"; so long as He is set forth as the One who "forgives all our iniquities and heals all our diseases"; so long as this stands in the middle of the Great Commission, "These signs shall follow them that believe, they shall lay hands upon the sick and they shall recover"; so long as the epistle of James remains confessedly of the Sacred Canon, "Is any sick among you? let him call for the elders of the church; and let them pray over him, anointing him with oil in the name of the Lord: And the prayer of faith shall save the sick, and the Lord shall raise him up; and if he have committed sins, they shall be forgiven him. Confess your faults one to another, and pray one for another, that he may be healed," my marching orders are too clear for me to refuse this service to any man who asks it; and the meaning of the Word is so evident that when the prayers go unanswered I will suspect my own faith rather than deny the truth of this Bible doctrine, or call in question the faithfulness of my covenant-keeping God. I am firmly convinced that had the orthodox churches of this country stood for what the Scriptures say on the subject of healing, the misty and uncertain teachings of Christian Science, on the same subject, would have received no attention whatever, and one of the strongest pillars of this fabric of false religion, would have been taken away from them to strengthen the foundations of the "faith as it is in Christ."

I turn, therefore, from the consideration of Christian Science and the Scriptures to the second subject.

CHRISTIAN SCIENCE VS. THE SCRIPTURES.

Here again, the points of antagonism between this modern movement and the religion of our Master are too many for any speaker to undertake even their statement in the time allotted for a single address. But to two or three of the most fundamental of these points I desire to call attention.

Christian Science *opposes the Scripture in its claim of equal authority.* In "No and Yes," p. 22, Mrs. Eddy says, "If the Bible and my work 'Science and Health' had their rightful place in schools of learning, they would revolutionize the world by advancing the Kingdom of Christ." There is no uncertain sound here. The Bible is not sufficient of itself; it must be supplemented by "my work"; it must stand on a level with "Science and Health." Again, she informs us, "In the year 1866 I discovered metaphysical healing and named it 'Christian Science.' The principle thereof is divine and apodictical." What other claim could be put forth for even the Word of God itself? But there is more to be said, and divesting herself of all mock modesty, she declares, "It was not myself, but the divine power of Truth and Love, infinitely above me, which dictated 'Science and Health with Key to the Scriptures.' I have been learning the higher meaning of this book since writing it. Is it too much to say that this book is leavening the whole lump of human thought? You can trace its teaching in each step of mental and spiritual progress, from pulpit and press, in religion and ethics, and find this step either written or indicated therein. It has mounted thought on the swift and mighty chariot of divine love, which to-day is circling the whole world. I should blush to write of 'Science and Health with Key to the Scriptures' as I have, were it of human origin, and I apart from God, its author. But, as I was only a scribe echoing the harmonies of heaven in divine metaphysics, I can not be supermodest in my estimate of the Christian Science text book." While her claim for her work is surely equal to that which any inspired prophet or apostle ever put forth in behalf of his section of the Sacred Canon; her opinion of herself would put them to shame.

In "Miscellaneous Writings" p. 34, the question is asked, "Has Mrs. Eddy lost her power of healing?" And answered, "Has the sun ceased to shine, or the heavenly bodies to revolve about it?" I don't know whether it has ever impressed you, but I am more and more amused to see how many people there are that get up "a new revelation," and how almost universally, they add it to the Bible as a needful addenda. Take these present-day sinners, who style themselves "Latter-day saints"—the Mormons, and every tract they distribute in this city begins with extensive quotations from the Bible, by way of making room for some of Joe Smith's revelations. The Christian Scientists do the same. "The Bible and my work." Paul seems to have known that this would be the method of procedure, hence our text, "I marvel that ye are so soon removed from him that called you into the grace of Christ unto another gospel: Which is not another; but there be some that trouble you, and would prevert the gospel of Christ. But though we, or an angel from heaven preach any other gospel unto you than that which we have preached unto you, let him be accursed. As we said before, so say I now again, If any man preach any other gospel unto you than that ye have received, let him be accursed." Gal. 1:6-9.

John also anticipated these coming heresies, hence concludes the Sacred Canon by saying "For I testify unto every man that heareth the words of the prophecy of this book, If any man shall add unto these things, God shall add unto him the plagues that are written in this book. And if any man shall take away from the words of the book of this prophecy, God shall take away his part out of the Book of Life, and out of the holy city, and from the things that are written in this book." Revelation 22:18-19.

Even if there were no curse touching this attempt, who believes that there is any profit in it; what one of these modern revelators imagines for an instant that his work is an improvement upon the Old Word, except it be that silly company of people who have studied Scriptures so little that they are not acquainted with their contents? A while ago I pulled my way through "Verbem Dei" by R. F. Horton, and heard that higher critic plead for a second Bible, a Sacred Canon to be gotten out of the writings of the fathers and modern preachers and teachers of note. And then, after all his argument for this second Bible, he turned about and told his auditors, "But the Bible itself is in so unique and peculiar a sense the Word of God that just in proportion as we receive a veritable word from God, in other directions we return to the Bible to find the message there more luminous, more harmonious, more Divine." All of which reminds me of that young man whose girl asked him if he didn't sometimes have thoughts that were difficult to express, and to which he replied, "Yes, and after I get them expressed, I cannot help wondering why I went to all that trouble."

Joseph Parker says, touching additions to the Bible, "There is not one! Even our beautiful hymns are beautiful only because they are Biblical. Have not some noble moral apothegms been added to the Bible? Not one! If one, pronounce it. If you produce it, I will engage to find it in the Bible as to its spiritual veracity. * * * Man's genius * * * cannot outrun or exceed God's inspiration." I call the claim of equal authority with Scripture for "Science and Health" blasphemy! And Paul and John join with me in the charge.

Again *Christian Science opposes Scripture in its denial of personality.* It denies the personality of God. On page 28 of "No and Yes" Mrs. Eddy says, "Is God a person?" and answers, "God is love, and love is principle, not person." Touching the personality of Jesus Christ in "Science and Health" Mrs. Eddy seldom mentions His name without following it by a dash and writing—"Truth"—in explanation of what she means. Touching the personality of Satan, she says, "There is no personal devil; that which is mistakenly called the devil is a negative or opposite of God, and whereas God is 'I am' or positive being, the Devil is not." And then again, "A lie is all the Satan there is." I never think of her teachings touching the Adversary without having Alfred J. Hough's poem come into my mind. A single verse from which must suffice.

"Won't somebody step to the front forthwith and make his bow and show
How the frauds and crimes of a single day spring up? We want to know.
The devil was fairly voted out, and, of course, the devil's gone;
But simple people would like to know who carries his business on?"

Touching the personality of man, this high-priestess with a single sentence, disposes of his body, saying that, "it is a great mistake to suppose that matter is any part of the reality of existence." p. 238 "Science and Health." And of mind by adding, "Man can never have any mind." And as the only soul she knows is, "all-soul" or "principle" what is left of the personality of man? No body, no mind, no independent spirit. It is amazing she ever consented to marry one; and yet, I cannot help thinking that she got the best of the bargain if "Science and Health" is an indication of her own intellect.

What does the Bible teach touching these things? God says, "I AM." Is there in human language any more definite and clear cut expression of personality? As Dr. Behrends says, "'I AM,'—that is God.—Self-concious, self-revealing; as personal and individual, as am I. The lines of battle have raged between transcendence and immanence. I care very little for the words. What I want to know is whether above the world or in it, God is 'I AM,' personal Being. For, if God be self-conscious and self-revealing, personal Being,—the path is open between Him and me. He can speak to me and I can pray to Him. Religion vanishes if man cannot come to God; and revelation vanishes if God cannot come to man; both religion and revelation are secure if God be the Eternal 'I AM,' —self-conscious and self-revealing. And in these days when theosophy makes dupes of some, and monism entangles others, both of them thinly disguised pantheism, the breezy and invigorating Christian affirmation of God as the living one needs sharp and continuous utterance."

As to Satan, so long as human language remains the vehicle of thought, intelligent men will never question the personality and power of this fallen spirit, who led our first parents into sin; who tempted our Lord; against whom Christians wage continual warfare; whose supremacy in the earth is prophecied for the latter times. (Rev. 13:4). And whose eventual overthrow is to characerize the beginning of the millennial reign. (Rev. 20:1-3). As to the personality of man I will not descend to the discussion as to whether I have a physical, mental and spiritual existence; so long as I continue to eat and think and worship, not even "Science and Health" excites a single suspicion at either of these points.

As to whether Christ is personal and came in the flesh, let John speak. "Hereby know ye the Spirit of God; Every spirit that confesseth that Jesus is come in the flesh is of God; And every spirit that confesseth not that Jesus Christ is come in the flesh is not of God." Christian Science utterly denies that Jesus came in the flesh. "And this is that spirit of antichrist, whereof ye have heard that it should come; and even now, already, it is in the world." I John 4:2-3.

Again, *Christian Science opposes the Scripture in its plan of salvation.* Touching the atonement it says, "Atonement is not blood. It stands for mortality disappearing, for Jesus' deathless life, which He left for an example and ransoms from all sins who follow it." You know the teaching of the Word. "Without shedding of blood there is no remission." (Heb. 9:22). "Washed us from our sins in His own blood." (Rev. 1:5). Christian Science says "There is but one way to heaven—harmony." Jesus says, "I am the way." (John 14:6). The difference here is radical and the opposition of Christian Science to Scripture texts diametrical.

Kenneth MacKenzie reminds us that Jude, in the 11th verse of his short epistle, speaking of the antichristian element that shall characterize society in the end of the age, says, "They have gone in the way of Cain." We know what the way of Cain was. He refused to come to God by way of the blood; he would have no unsightly sacrifice, but be accepted by a beautiful basket of fruit,—God must take him on his own merits—in consequence of the work of his own hands, or he will not be received at all; while Abel, his brother, preferred to take God in the way of His appointment, and brought the slain-offering. The religion of one led to murder; the religion of the other made a martyr. When you have gone seven steps from Cain's life you find a son in Lamech, who was a polygamist and a murderer in one; when you have gone seven steps from Abel's life, you find a son,—Enoch—"who walked with God" and was translated "not seeing death, because he pleased God." And só long as the world stands, these opposing theologies will present kindred spectacles. The man who attempts salvation without accepting the "Lamb of God, slain from the foundation of the world" will lose his soul and start a stream of evil influences; the man who comes to the Christ of the Cross, will not only go up to be with Him in paradise, but leave for the world a testimony touching the saving power of the suffering, conquering Son of God, that will prepare other souls to be blessed of Him, and privilege them a translation into His presence.

Finally,

THE SCRIPTURE VS. CHRISTIAN SCIENCE.

In considering the points where the Scriptures would take positive issue with Christian Science, we have chosen to name the three most important ones.

The Scriptures teach that sin is a solemn fact. There are few words in the Sacred Canon that play so conspicuous a part as the term SIN. If you look into Young's Analytical Concordance you will discover that it takes seven columns of that large volume to print the single lines in which the word SIN appears. The meaning of the term is defined by the apostle. "Sin is the transgression of the law." I John 3:4. Of what we call sin Mrs. Eddy says, "God—or goodness could never make men capable of sin. * * Now evil is but an illusion, has no real basis except belief." The Scriptures say, "If we say that we have no sin, we deceive ourselves and the truth is not in us. * * * If we say that we have not sinned we make Him a liar and His word is not in us." I John 1:8 & 10. Mrs. Eddy says, "Men cannot depart from holiness." The Scriptures say, "They are all gone astray." "There is none righteous, no not one." "For all have sinned." To deny the fact of sin is to fit one's self for its commission with impunity. To humbly confess our sins is to come unto the promise of Him "who is faithful and just to forgive us our sins and to cleanse us from all unrighteousness."

Again, *the Scriptures represent unregenerate souls as lost.* "The soul that sinneth it shall die." (Eziel. 18:4). "He that hath not the Son of God hath not life." (John 5:12). "He that believeth not the Son shall not see life, but the wrath of God abideth on him." (John 3:36). "The Son of man is come to seek and to save that which was lost." (Luke 19:10). Christian Science says, "It is the sense of sin, not the sinful soul, that is lost." Christian Science says, "No final judgment awaits mortals." The Bible says, "We must all appear before the judgment seat of Christ." (2 Cor. 5:10). The Bible says, of those who maltreat and neglect the brethern of the Lord, "These shall go away into everlasting punishment." (Matt. 25:46).

Beloved, it were of little value that you follow the Scientist sincerely, honestly believing that you are doing right in accepting what he says, for if he depart from the Word of the Lord, and you follow him, doom will be the experience of both, your sincerity notwithstanding.

Sincerity never saves any body. The other day, Engineer Strong, of "the Continental Limited" train, on the Wabash railroad, took his dispatch from the station agent and read it, "Pass at Sand Creek," but it was written, "Pass at Seneca." He ran his engine supposing he had read aright. The result was a crash of two passenger trains, at a point near Adrian, Michigan, and the telegraph wires flashed across the country, "80 dead and 125 injured." He was sincere, but sincerity cannot save those who wrongly interpret authoritative writings.

The Scriptures present Jesus as the only, but adequate Saviour. And here they clash with Christian Science. As we have seen, it says, "There is but one way to heaven,—harmony." The Scriptures say, of the Son of God, "This is the stone which was set at naught of you builders, which is become the head of the corner. Neither is there salvation in any other, for there is none other name, under heaven, given among men, whereby we must be saved." (Acts 4:11-12.)

And, as I have remarked he is not merely the only Saviour, but according to the Word, the adequate one. Of Jesus of Nazereth, Paul wrote, "This man, because he continueth ever, hath an unchangeable priesthood. Wherefore he is able also to save them to the uttermost that come unto God by him, seeing he ever liveth to make intercession for them. (Hebrews 7:24-25.)

"Choose you this night, which you will have," a Science falsely so-called, which converts the eternal Father into a principle; the arch enemy of man into an illusion; body, mind and spirit, into error of thinking; and heaven into Buddha's Nirvana; or, what the Bible sets forth—a God you can call your "Father in heaven" (Matt. 6-9); whose love is such that He sent His Son to save you (Rom. 5:8); through whose sacrifice you may escape (Rom. 8:1); and a heaven set for all those who are washed and made clean in the Blood of the Lamb; and which shall remain forever the abode of the happy and undefiled (Rev. 22:27).

For my part, give me a Father who can think for me; and whose personal heart can pity me; a Saviour whose experience in the flesh has taught Him to be sympathetic with me even in my sins, and whose omnipotence makes possible my redemption out of them; a Holy Spirit whose office work it is to convict, instruct and comfort me; and a soul whose conscious independence is the pledge of a possible communion with God Himself and with all saints and angels, if that soul but accept the salvation that is in Jesus.

James Knapper was in Chicago without a cent and out of work. He went one night into a humble home on Dearborn Street, and asked for a meal. The Christian woman gave it to him, and while he hungrily consumed it, talked to him of Christ. Before he left the house she asked him if he wouldn't kneel and let her pray for him. And, he says, "There, for the first time, I bent the knee before God. And, friends, I was not long in finding Him. That night I knocked, and almost instantly the door of life was opened to me, and I, who was before that hour a wicked outcast, have since that time walked with Him who was Abraham's friend, and whose truest title is—'Friend of sinners.'"

Ah men and women stricken of sin, conquered by the Adversary, you know that your experiences of defeat are real! and I know it! But I also know what I want you to know, namely—that your victory against sin, and against the great Adversary of the soul, may be also real to-night, if only you will come to that Son of God who says, "Him that cometh unto Me I will in no wise cast out."

Medical Miscellany.

CHOICE OF AN ANESTHETIC FOR CHILDREN. "In the choice of anesthetics for children many things are to be considered," says Dr. E. J. Wynkoop, in the Buffalo Medical Journal, "and the old saying, 'Chloroform for pregnant women and children, ether for adults,' will bear further investigation. The most popular anesthetic for children today is unquestionably chloroform."

The paper considers only four compounds for anesthesia; viz: chloroform, ether, nitrous oxide gas, and bromide of ethyl.

Chloroform is a direct poison to the heart muscle, and by its action reduces blood pressure. It does not as a rule irritate the throat and lungs, if properly given. Vomiting is unusual if the patient's stomach has been properly attended to. Except, then, for its action on the heart, chloroform is an ideal anesthetic, but, knowing this action on the heart, are we justified in its routine use?

Ether, which is a well known cardiac stimulant, is claimed by some to irritate the throat, lungs and kidneys, and liable to provoke vomiting.

Bromide of ethyl is a cardiac depressant like chloroform, causing muscular rigidity and a tendency toward hemorrhage, liable to impurities, and has no advantage over chloroform.

Nitrous oxide gas is more often used than any other anesthetic, and during its physiological action death is not common. The objection to its use lies in the very short stage of anesthesia, allowing only the shortest operation to be done.

According to the report of the German Surgical Society the proportion of deaths is greater from chloroform than from ether.

About one year ago Wyeth gave as his opinion that in children under twelve ether is far preferable to chloroform. Hinkel and Halstead also advise ether. Edmund Owen reports two deaths from chloroform, not his own cases, however.

The author quotes from Finney, of Johns Hopkins: "As a rule in all cases of weak heart, from whatever cause, chloroform is most dangerous. It is more dangerous too in very nervous, apprehensive patients, in kidney diseases and the like, while ether in acute lung affections and alcoholics is more dangerous than chloroform."

The author closes his paper with the following statement: "I cannot emphasize too strongly my conviction that in severe operations the anesthetist plays a most important, and in some cases a more important, role than the operator, and one of the reforms most urgently needed in the medical profession of our country today is a thoroughly competent corps of anesthetists in our hospitals and in our medical schools, and a thorough and complete course of instruction in the proper methods of administration and use of these agents, so powerful for good when rightfully used and so useful for relief in suffering humanity, and yet capable of producing such disastrous results."

SOUTHERN MINNESOTA MEDICAL ASSOCIATION. The Mankato meeting of this body, on December 3, 1901, resulted in the selection of the following officers: W. J. Mayo, of Rochester, president; F. A. Dodge, of Le Sueur, first vice president; J. W. McCarthy, of Madelia, second vice president; E. W. Benham, of Amboy, third vice president; E. D. Steel, of Mankato, secretary; G. F. Merritt, of St. Peter, treasurer.

The following executive committee was chosen: Drs. C. F. Warner, of Mankato; O. C. Strickler, of New Ulm; Ira Bishop, of Mapleton; J. P. Humes, of Winnebago City; A. E. Jacobs, of Elmore; D. S. Cummings, of Waseca; A. E. Spaulding, of Luverne; M. J. Taylor, of Janesville and J. S. Holbrook, of Mankato.

The session is said to have been an interesting and profitable occasion, and several valuable papers were read.

TUBERCULAR CATTLE IN WISCONSIN TO BE SLAUGHTERED. The Wisconsin Live Stock Sanitary Board has completed its regulations relating to the disposition of animals affected with bovine tuberculosis. The report provides that the owner shall quarantine such cattle under the direction of the state live stock sanitary board, or ship them to the secretary of the Chicago Live Stock Exchange, or some other abattoir, for immediate slaughter under United States government inspection, or the cattle are to be condemned and slaughtered.

OSTEOPATHS BARRED FROM SECURING BODIES OF THE PAUPER DEAD. Colleges of osteopathy are not medical colleges, according to an opinion furnished by W. J. Donahower, assistant attorney general, to Dean Ritchie, of the medical department of the University of Minnesota. The Northern College of Osteopathy had claimed its share of bodies for dissection under the law appropriating them to medical colleges. Mr. Donahower finds that, as osteopathic students do not acquire a knowledge of surgery, and are not prepared to take the examination of the state medical board, they are not, under the law, medical students.

HAD HIS BODY PLACED UNDER GLASS. People about Deepwood, in Nevada, are wondering how long the body of Louis Dorsey, which is now exposed under glass in the cemetery, will retain its life-like freshness. "Dorsey's tomb" is now one of the sights there. The tomb, cut from Carthage granite, is about ten feet long, five feet wide and five feet high. In its center the coffin is incased around by about twelve inches of solid stone, which makes it air tight. On the top is a revolving stone, cut in the shape of a bible, which in turning can be made to reveal or conceal a glass pane. Through the glass pane the embalmed body of Dorsey is plainly visible. The widow, who designed the tomb, used the insurance money on his life to carry out the work. Up to the present time the body preserves the freshness of life. —Embalmer's Monthly.

AN INNOVATION AT THE UNIVERSITY.—It has been the custom to allow seniors in the academic department who intend to take a medical course after graduation, to take a year of their scientific work in the academic department, and receive credit for it in the medical department, thus completing their two courses in seven years. The state board has refused to issue permits to practice to anyone who has not taken four years' work in a medical school. Hence the old plan will have to be abandoned, and after this only scientific work done in some medical school will be credited by the departments of medicine at the University of Minnesota.

LITTLE BOBBIE had longed long and earnestly for a baby brother and a pair of white rabbits. The answer to both wishes came on the same morning, but it was not quite satisfactory, for there were two baby brothers and only one rabbit. Bobbie was greatly disgusted at the mistake. The next day his father found the following notice tacked to the gate post: "For sail.—One nice fat baby or i will swap him for a white Rab-Bet."

NO TETANUS GERMS IN VACCINE. According to a special report of the Camden, N. J., board of health covering the board's investigations of the cause of the several deaths from tetanus that recently occurred in that city following vaccination, there were no germs of tetanus in the vaccine used. It is stated that after a thorough investigation of the history of each case, and a bacteriological examination of the vaccine used, the board found that the tetanus was not due to the vaccine, but to the unusual atmospheric conditions at the time the vaccinations were made. There had been a long peiod of dry weather, with high winds, so that tetanus germs—which have their normal habitat in the earth, dirt of stables, etc.—had been distributed in the atmosphere, and through neglect on the part of the persons vaccinated, came in contact with the exposed wound. As further evidence of the truth of their conclusions, the board points to the fact that tetanus did not develop in any case until from three to four weeks after vaccination, whereas tetanus, if contained in the vaccine, would have manifested itself invariably within nine days after vaccination.

THE NEW YORK SANATORIUM FOR CONSUMPTIVES. A site for the contemplated colony of tuberculosis in the state of New York is now under consideration. The board of managers of the proposed home has been in the Adirondacks and, it is understood, has selected a site between Saranac village and Lake Placid. It is said that there is no healthier place in the mountains and great results in the line of prevention are looked for. The legislature of the state appropriated $150,000 for the site and buildings.

The above should be a stimulus to the citizens of the northwestern states, which possibly might combine in establishing a mammoth home in the park regions of Minnesota or some other location that will be convenient for patients from all sections of the territory named.

THE ANTI-SPITTING LAW OF MINNEAPOLIS. Such an ordinance was passed in the closing days of the 1898 city council, and has occupied an obscure corner in the council proceedings since then. There are very few who are even aware of its existence, and no move was ever made to enforce it. The ordinance makes it a misdemeanor to spit or throw tobacco quids or cigar stubs on the sidewalks, or in the hallways of public buildings, and prescribes a fine of $5 for its violation.

A TOE FOR A THUMB.—New York Medical Journal tells of a truly remarkable operation by Nicholadoni: transplantation of a toe. The second toe of the right foot was used to replace a thumb, lost by an accident, cut in a trapeziform manner. The extensor tendon of the second toe was united with the stump of the extensor longus pollicis. By silver sutures the phalangeal stump of the thumb and the first phalanx of the toe were united. The flexor tendons of the foot were united to each of those of the thumb. The result was good. Sensation and motion were slowly returning at the time of the report.

A KANSAS VICTIM OF NARCOLEPSY. A report from Hiawatha says that a pioneer there died a few days ago from the sleeping-disease. His sickness lasted three years and was particularly noticeable in that he slept most of the time. While in Santa Ana, Cal., he slept from May 28 to Aug. 20. He was brought home early in September and slept continuously since the second day of that month until he died a few moments after awakening from his last sleep, a few days ago.

BURNS TREATED WITH CARBOLIC ACID. O. L. Muench, in his article on carbolic acid in burns, says that the general result in burns treated with carbolic acid is complete exclusion of air and coagulation of the serous effusions, and that the healing process takes place with much less suffering and in a shorter time than by any other method which the author has tried. It is possible that carbolic acid poisoning may be produced by absorption in severe surgical cases when employed in too dilute a form, but the author has not seen a single case during his whole practice. Many persons think the only virtue of carbolic acid is an antiseptic one, but he thinks the exclusion of air is just as important as to prevent the entrance of microbes.—Dr. Otto Muench, in Medical News, Philadelphia Medical Journal.

Book Notices.

A TEXT-BOOK OF MEDICINE for Students and Practitioners. By Dr. Adolph Strumpell, Professor and Director of the Medical Clinique at the University of Erlangen. Third American Edition, Translated by Permission, from the ThirtyEighth German Edition, by Herman F. Vickery, A.B., M.D., instructor in Clinical Medicine Harvard University, etc., and Phillip Coombs Knapp, A.M., M.D., Ex-President of the American Neurological Association, Clinical Instructor in Diseasese of the Nervous System, Harvard University, etc., with Editorial Notes by Frederick C. Shattuck, A. M., M. D., Jackson Professor or Clinical Medicine, Harvard University, etc. With One Hundred and Eighty-five Illustrations in the Text, and One Plate. New York City: D. Appleton and Company, 203 Michigan Avenue. Price $6.00; sheep $7.00.

On the great work and the distinguished character of Dr. Strumpel in Germany it is unnecessary for us to indulge to any great extent in eulogistic expressions, for this well known author is too popular with the general profession throughout the world to need a further introduction on the part of any journal, whether German, French English, Italian, Spanish, Russian, modern Greek, Turkish, or Japanese, as the Doctor's Text-Book has been translated into all these tongues, which fact, of itself, is convincing evidence that an author of rare merit has been recognized in all lands to be worthy of an exalted position as an authority on medical topics. His services at the medical clinique alone have been sufficient to give him a position of very great prominence, but add to these his labors as a general practitioner and medical writer, the profession have a combination of striking individualities that is quite unique.

The letter-press of this Text-Book of Medicine is divided off under the following general heads: Acute General Infectious Diseases; Diseases of the Respiratory Organs; Diseases of the Circulatory Organs; Diseases of the Digestive Organs; Diseases of the Kidneys, the Pelvis of the Kidney, and the Bladder; Diseases of the Organs of Locomotion; Diseases of the Blood and Tissue-Metamorphosis; and diseases of the Nervous System. The translators adhered closely to the original text, but added a chapter upon the plague, which they say they "hope may prove of assistance to the American practitioner."

All topics are well handled, but the author reserved for the last one which has of recent years received more attention by the profession at large probably than any other, viz., diseases of the nervous system. There is evidence that he reserved the chapters devoted to this subject for the expansion of his literary force which was held in abeyance in his preceding efforts, for he allots to it over four hundred pages that are more elaborately illustrated than any other section of the work.

It is of course impossible here to go into the subject matter of the text, but practitioners who wish to keep abreast of the times are respectfully referred to the work itself.

MEDICAL DIAL

A Monthly Record of Medicine and Surgery

Published by MEDICAL DIAL COMPANY

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Medical contributions respectfully solicited from Regular Physicians. The editor or publishers will not be responsible for the opinions expressed by correspondents. No attention paid to anonymous communications. Contributors will be furnished with a reasonable number of extra copies, gratis, for distribution among their medical friends. Reprints furnished only at actual cost.

SUBSCRIPTION PRICE

United States, Canada and Mexico, per annum, in advance, - - - - - - - - - - - - - - $1.00
Foreign Countries in the Postal Union, per annum, in advance, - - - - - - - - - - - - - 1.50

N. B. Matter for the reading pages should reach office of publication on the 20th of the preceding month and display advertising on the 25th, to insure attention.

Vol. IV MINNEAPOLIS, MINN., FEBRUARY, 1902 No. 2

CHAUCER'S DESCRIPTION OF A PHYSICIAN. The Doctor of Physic:

With us there was a doctour of phisike;
In all this world, he was there none him like
To speake of phisike and of surgerie,
For he was grounded in astronomie.
He kept his patient a full great dell
In houses: by his magike naturell
Well couth he fortune the assendent
Of his image for his pacient.
He knew the cause of every malady,
Whether it were of cold, heate, moist, or dry,
And whereof engendered was each humour.
He was a very parfit practiisour;
The causel knew, and of his haime the roote,
Anon he gave to the rich man his boot.
Full ready had he his apoticaries
To send him drugs and his lectuaries;
For each of them made other for to winne,
Their friendship was not new to beginne.
Well he knew the old Esculapius,
And Diascorides, and eke Ruffus,
And Hippocrates, and Galen,
Serapion, Rasis, and Avicen,
Aberrois, Damascene, and Constantin,
Bernard, Galisden, and Gilbertin.
Of his diet measurable was he,
For it was of no superfluitie;
But of great nourishing and digestible.
His study was but little on the Bible.
In sanguine and in percepolad withall
Lined with taffata and with sendall;
And yet he was but easy of dispence.
He kept that he won in time of pestilence;
For gold in phisike is a cordial,
Therefore he loved gold speciall.

—From "Curiosities of Medical Experience," by J. G. Millingen, M. D., M. A. (Published London, 1839).

FRIENDS OF THE MEDICAL DIAL—they are getting to be numerous and select—will be pleased to know that we are moving into larger quarters on the fifth floor of the Masonic Temple, Nos. 517, 518, 519 and 520, where it will be possible to conduct the business of publication with more expedition, and that before another number of the journal shall reach its readers we will be settled to "housekeeping" for the reception of business callers.

SMALLPOX. There is no doubt as to the extensive prevalence of smallpox in the state of Minnesota and throughout the northwestern part of the country; also in a considerable portion of the east and in the middle states.

The report of Dr. Bracken, secretary of the Minnesota State Board of Health, gives the following statistics, which show the rapid increase of the number of cases during the past three years. Total number of cases reported for the year 1899, 257; for the year 1900, 1,371; and for 1901, 8,485. But the disease has been constantly of a milder form. The doctor says: "The more cases, the fewer have been the deaths, although there were more than 30 cases last year to one case two years ago, the proportion of deaths was no more than four to one, that is, 11 smallpox patients died in 1899 and 43 in 1901, the percentage for the last year being only one-half of one per cent." Although the disease is widespread at the present time in Minnesota the secretary thinks there is no more of it here, in proportion to the population, than they have in the Dakotas, Wisconsin or northern Iowa; and according to the latest reports the same percentage of fatalities is the rule everywhere—one-haif of one per cent. The doctor says: "This type of smallpox is less fatal than whooping cough; our only cause for anxiety is that smallpox has a way of suddenly changing its type and shifting from a nuisance to a scourge."

Recent statistics of the disease in the east show the extent of its hold in that part of the country. In Boston, Mass., in one week, from Dec. 14 to Dec. 21, 1901, 41 cases were reported, with 12 deaths. Burlington, Vt., from Sept. 28 to Dec. 21 reported 55 cases; number of deaths, if any, not stated. Newark, N. J., reported 24 cases from Dec. 14 to Dec. 21, with 12 deaths. Philadelphia, Pa., during the same week reports 16 cases, with 10 deaths. Cincinnati, Ohio, from Dec. 13 to Dec. 20 reports 11 cases, and the number of deaths, if any, not stated. With the exception of London, where from Nov. 30 to Dec. 7, 474 cases, with 20 deaths, are reported, foreign cities appear to be comparatively free from the disease. Prague, Austria, from Nov. 23 to Dec. 7 reporting only 7 cases; Antwerp, Belgium, from Nov. 23 to 30 only 3. Paris, France, from Nov. 30 to Dec. 7 reports only a single case; this seems hardly credible. Naples, Italy, from Nov. 23 to 30 reports 18 cases, with 1 death. Odessa, Russia, from Nov. 23 to Dec. 7 reports 22 cases, with three deaths.

There may be several causes for the unusual number of cases in this country, the chief of which are the return of soldiers after the late war with Spain, and the occasional return of those serving in the army of the Philippine islands. Another, and perhaps not the least prolific, cause may be the general neglect of vaccination from carelessness, and partly on account of the opposition raised by a few individuals for fear of contagious diseases, which is largely imaginary. But whatever the causes assigned for the epidemic, the fact that the disease is here and has staying qualities cannot be ignored. That the form is of a mild character, and that few deaths occur, is probably on account of the partial protection most persons have secured in the past, and have not been thoroughly protected by recent and successful vaccination.

The Philadelphia Medical Journal, in its number of January, 1902, has the following report from Dr. William M. Welch, Chief Physician to the Municipal Hospital in Philadelphia, viz.: "That no person who has been vaccinated recently in a successful manner has been admitted to the Municipal Hospital suffering from smallpox since the outbreak of the present epidemic," and the list of cases includes 980. "Any one thus treated" (successfully vaccinated), the doctor says, "may sleep in a smallpox hospital, mix with the patients, and take every risk of exposure with impunity." With all the experience from vaccination in the possession of the world as a preventive of this dreadful disease, it seems futile, at this late day, to argue the question of its usefulness with a few anti-vaccinationists, who continue to raise their strident voices in opposition to so well established and rational a treatment, for, though overwhelmed by facts and vanquished over and over again, "they can argue still." That a few accidents have occurred by carelessness may be admitted, but what other operation so widely practiced, both by competent and incompetent operators, has been free from unfortunate results occasionally? When a whole comunity is as thoroughly protected as possible by recent vaccination, a smallpox case straying into its midst would have no terrors for individuals, and need not interfere with business, schools, social duties, or the movements of travelers. ,

"PUBLIC HEALTH SERVICE."

There is a strong movement on foot in Washington, and a bill has already been prepared and introduced in Congress, to change the name of the United States Marine Hospital Service to the "United States Health Service," but it is suggested by the Philadelphia Medical Journal that the name should be the same as the caption above. The old designation is quite misleading, as many presume this branch of the public service is one arm of the navy alone, whereas it has for many years had a much broader field of operation. Its functions are to promote public health and there is good reason why it should be given a name that shall convey its proper scope. The bill proposed is outlined by the Journal as follows:

"It recognizes and authorizes several Divisions of the Bureau in Washington, and makes the officer in charge of each Division an Assistant Surgeon General. It thus improves the organization and discipline of the service. This it promotes also in other ways. It recognizes the essentially military character of the organization and personnel of the corps.

"This provides a proper status for the officers, who, in discharging their duties, are often brought into intimate contact with the Army and Navy, with other public services, with state and municipal affairs, and, in a representative character, with learned societies and even with foreign governments. It is highly desirable that this Public Health Service should have the proper prestige which comes from thorough government organization and countenance.

"It is intended also to bring the laboratory work of the service into relation with the scientific work of the Army, Navy, the Department of Agriculture and with the various scientific laboratories in different parts of the country. Thus its work will be both stimulated and correlated. Provision is made for the employment of skilled laboratory workers.

One of the most important provisions of the bill is for co-operation between National and State authorities in matters of health. Not a year passes but the necessity for closer union and more harmonious work is manifested. This is seen especially in cases of epidemic diseases. Such diseases do not respect state lines, and they need a centralized authority to direct the control of them. In collecting vital statistics the newly-named service can and will perform a good work by promoting the adoption of uniform blanks. Vital statistics in this country are in a state bordering on hopeless confusion for want of uniformity.

"We believe this bill to be one of the most important measures, from a medical standpoint, that have appeared before Congress in recent years. It evidently contemplates the larger and fuller participation of the general government in all matters relating to public health. We regard this as in every way an augury of good."

BACILLUS OF CANITIES. A great man is alleged to have discovered the bacillus of gray hair. Metchnikoff named this mischief-maker the Bacillus pigme-tophagus, on making the discovery. Now if some gentleman will come forward and tell us the spore of baldness he will confer a blessing on men who wear hats sixteen sizes too small for their heads.

NATIONAL OR STATE CERTIFICATE—WHICH? To a physician who desires to change his residence from one state to another, although he may be entirely proficient, sucecssful and progressive, one of the most perplexing problems for him to solve is the securing of a state license in the state to which he expects to remove. Will he have any trouble in procuring same? Will there be a combination of physicians in the new field which will use its influence to exclude all new comers? Can he answer the catchy questions that are liable to be propounded? Has he forgotten the old names that were on his mind when he graduated years ago? Will it take any sugar to buy up the political appointees on the examining board? These are the questions that will confront him when he thinks of removing to a new field in possibly an adjoining state. But why is it necessary that a doctor should be compelled to submit to possibly a whimsical set of questions that change with every degree of latitude or longitude?

The solution would be the establishment of a national board of medical examiners. Then the graduate could go before this board, pass—if he can—the examination required, receive his certificate, and depart in peace, and, if in after years he wishes to move to some other commonwealth than that in which he has been located, for reasons known to himself, there will be no obstacle in the way.

FOOD ADULTERATION IN ENGLAND. A departmental committee has issued a blue book, and presented same to Parliament, giving the results of an exhaustive investigation into the use of preservatives and coloring matter in foods and drinks, which should be in the hands of physicians and persons who make a special study of the food question, but whether copies can be had we are not informed. The Philadelphia Medical Journal thus summarizes the conclusions reached, stating that they "seem to be conservative in the best sense of the word:"

"That the use of formaldehyde or formalin, or preparations thereof, in foods or drinks be absolutely prohibited, and that salicylic acid be not used in a greater proportion than 1 gr. per pint in liquid food and 1 gr. per pound in solid food. Its presence in all cases to be declared.

"That the use of any preservative or coloring matter whatever in milk offered for sale in the United Kingdom be constituted an offense under the Sale of Food and Drugs Acts.

"That the only preservative which it shall be lawful to use in cream be boric acid or mixtures of boric acid and borax, and in amount not exceeding 0.25 per cent. expressed as boric acid. The amount of such preservative to be notified by a label upon the vessel.

"That the only preservative permitted to be used in butter and margarine be boric acid, or mixtures of boric acid and borax, to be used in proportions not exceeding 0.5 per cent expressed as boric acid.

"That in the case of all dietetic preparations intended for the use of invalids or infants chemical preservatives of all kinds be prohibited.

"That the use of copper salts in the so-called greening of preserved foods be prohibited.

"That means be provided either by the establishment of a separate Court of Reference or by the imposition of more direct obligation on the local Government Board to exercise supervision over the use of preservatives and coloring matters in foods, and to prepare schedules of such as may be considered inimical to the public health."

HAVE WE TUBERCULAR MILK?

The State of Minnesota is justly noted as one of the greatest dairy commonwealths in the Union, but are we always sure that the milk, cheese and butter are the products of healthy cows, free from tuberculosis? Over in New York the Commissioner of Agriculture "recently discovered a herd of tuberculous cows in a dairy from which some of the city (N. Y. C.) milk supply is obtained," says the Medical Record. The herd contained 108 cows, and out of these fifty have died of tuberculosis during the past six months. The herd was, of course, quarantined, etc. This shows an alarming condition, and if such remarkable finds are made in a great state like New York, what may not be discovered in Minnesota, or, in fact, any of the Northwestern states. Cows are not immune in our own delectable climate, though the disease is not so liable to occur as in the eastern section of the country, yet the profession and the public would be pleased to know that none of the above products are sold which may contain the germs of the disease mentioned.

The Lateral Cervical Triangle.

(Uretero-Arterio-Cervical Triangle.)

BYRON ROBINSON, B. S., M. D., Chicigo, Illinois.

This triangle is bounded externally (in the resting uterus) by the ureter (1½ inches), proximally by the cervical loop (1 inch) and internally by the lateral borders of the cervix and vagina (1½) from os internaum to the vesicle orifice of the ureter.

The cervical loop or internal portion of the plevic floor segment with the ureter and lateral cervical vaginal border forms what I shall term the uretero-arterio-cervical triangle or shortly the lateral cervical triangle. The cervical triangle like the cervical loop is of vast import in hysterectomy.

In every vaginal or abdominal hys-

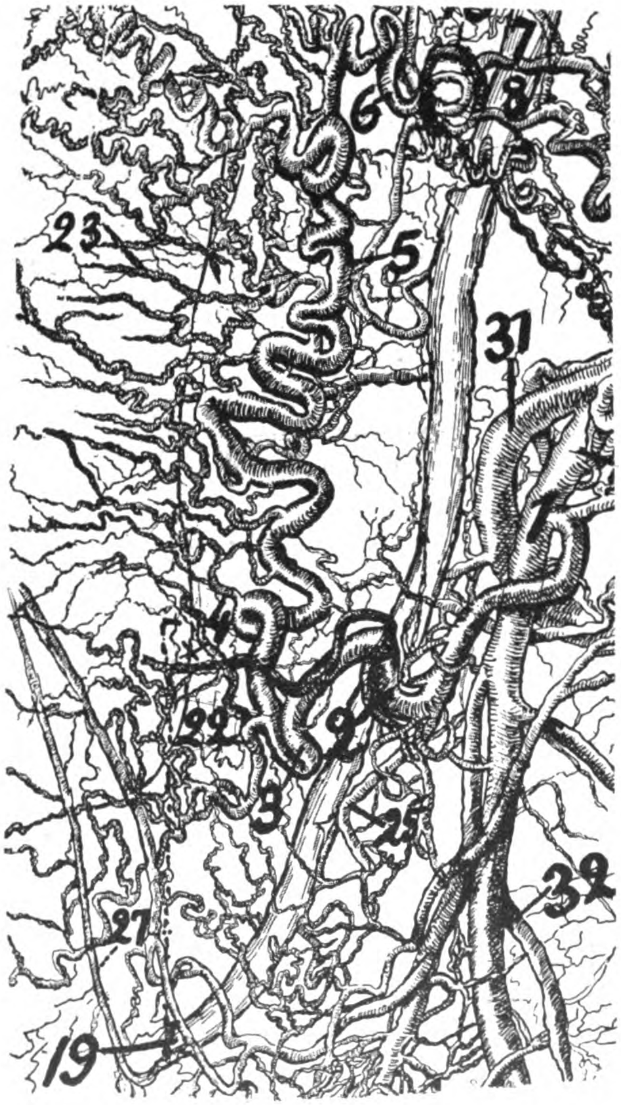

FIGURE 1.

FIG. 1. Left side of pregnant uterus, three months, reproduced from an X-ray, taken in Dr. Pratt's laboratory. I injected the genitals in situ at the post mortem with red lead and starch. It illustrates the lateral cervical triangle; viz., (2, 3, 4,) the cervical loop (1 inch) is

the proximal side; (2, 19) the ureter (1½ inches) is the distal side and the lateral border of the cervix and vaginal fornix (1½ inches) is the median side (dotted line). During vaginal hysterectomy, by means of the traction forceps fixed to the cervix and drawn distalward in the vagina, the proximal side, the cervical loop, (2, 3, 4) and the distal side of the triangle, the ureter, (2, 19), become reversed, and the index finger penetrates the lateral cervical triangle from the dorsal surface in order to ligate the cervical loop. The lateral cervical triangle, (2, 4, 19). I, 2, 3, 4, the pelvic floor segment of the utero-ovarian artery; 2, distal arterio-uteral crossing; 2, the distal arterio-ureteral loop; 2, 3, 4, the cervical loop; 4, 5, 6, the uterine segment of utero-ovarian artery; round ligament segment of the utero-ovarian artery; 18, middle ureteral crossing; 19, distal or vesicle orifice of ureter; 22, ramus lateralis cervices, which divides before reaching the cervix, one branch supplying the anterior and the other branch (marked X) supplying the posterior wall of the cervix. This leaves a boot-jack vascular angle at the lateral cervical border, and hence the lateral border of the cervix is supplied with capillary circulation only, therefore there is an exsanguinated zone at the lateral cervical border which accounts for the slight hemorrhage in cervical lacerations. 22, also the distal bifurcation of the utero-ovarian artery; 23, rami laterales corporis; 25, vaginal arteries; 27; vesical arteries.

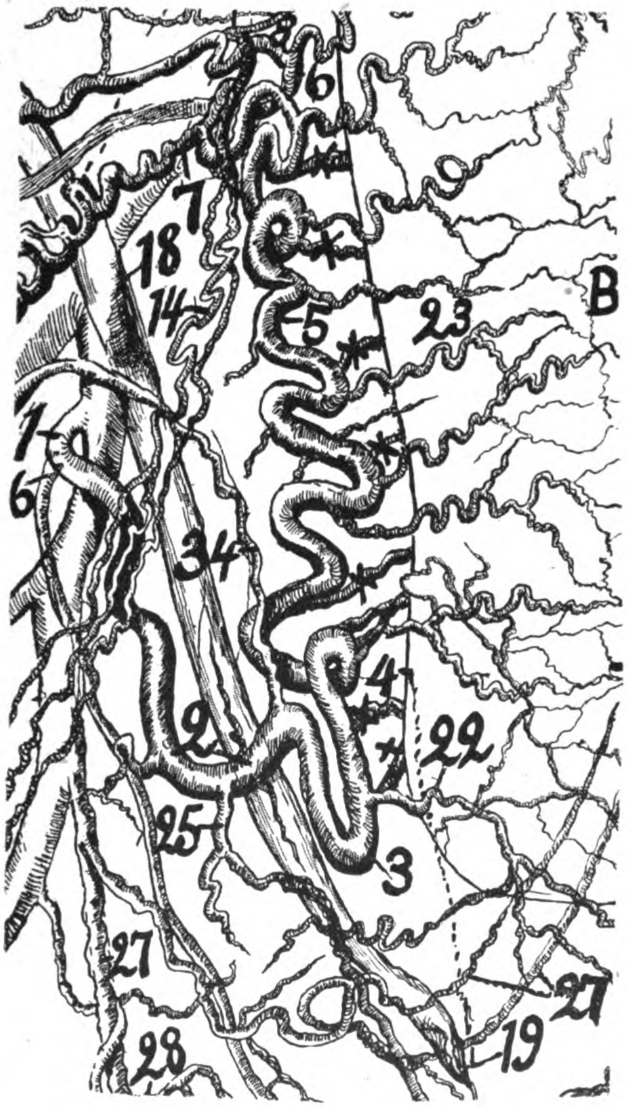

FIGURE 2.

FIG. 2. The right side of the same three-months' pregnant uterus, which I dissected and sketched. It shows well the lateral cervical triangle (2, 19, 4). The description of this figure is the same as figure 1.

terectomy the lateral cervical triangle must be penetrated in order to ligate the servical loop which is the proximal side of the lateral cervical triangle. In performing vaginal hysterectomy the proximal side of the triangle, the cervical loop (2, 3, 4,) and the distal side of the triangle, the ureter, (2, 19,) become reversed i. e. they take each the place of the other.

Normally the cervical loop (2, 3, 4,) is proximal and the ureter (2, 19) is distal, when the cervix is darwn by traction forceps into the vagina the ureter remains in situ while the cervical loop gradually passes distal to the ureter until one can pass the index finger through the reversed cervical triangle with the cervical loop distal and the ureter proximal.

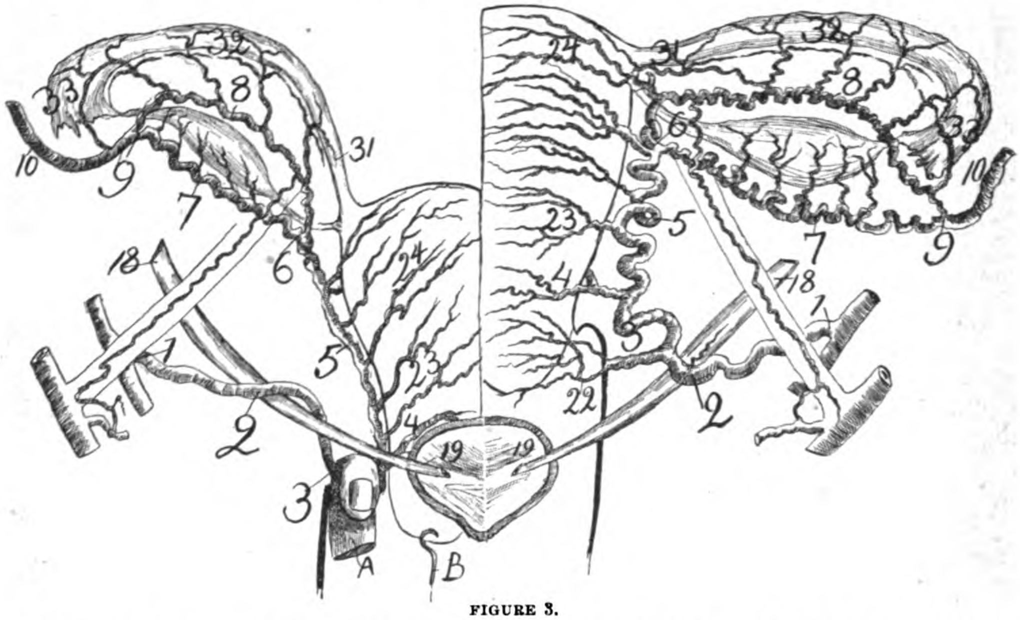

FIGURE 3.

FIG. 3. A cut to illustrate the lateral cervical triangle (2, 4, 19); reversed (2, 3, 19) during operation by drawing the cervical loop (2, 3, 4) distalward.

The cervical loop (2, 3, 4). The lateral cervical triangle (2, 19; 2, 3, 4; 4, 19). 1. Origin of pelvic floor segment; 2, distal arterio-ureteral crossing (also arterio-ureteral loop and distal arteria ureterica); 3, cervical loop; 4, internal os; 5, uterine segment; 6, middle bifurcation of utero-ovarian artery; 7, ramus ovarii; 8, ramus oviductus; 9, junction of oviducal and ovarian segments (also proximal bifurcation of utero-ovarian artery); 10, ovarian segment; 19, vesical orifice of ureter; 22, ramus cervices; 23, ramus corporis; 24, rami fundi; 31, 32, 33, oviduct; A, finger hooked around the cervical loop; B, traction forceps drawing the right half of the uterus distalward in the vagina. Note that the normal position of the uterus and trigone remains in situ while the operation proceeds.

The original of this drawing was taken from very careful dissection under alcohol and is accurate. Presentation of the circulation of genitals (see left side). The right half was subsequently modified to accommodate the manipulations on the lateral triangle during vaginal hysterectomy.

These anatomic data can be noted in the normally located and the reversed condition of the lateral cervical triangle in the accompanying cuts. The safety in performing vaginal hysterectomy lies in the penetration of the lateral cervical triangle close to the median border (cervical and vaginal border) from the dorsal or ventral surface and also in forcing lateralward the distal arterio-ureteral crossing, (2). Of course vast additional safety is added by a long cervical loop (2, 3, 4). During vaginal hysterectomy the chief practice consists in perforating the reversed lateral cervical triangle from the dorsal surface with the index finger. In Pratt's operation of hysterectomy without ligation of the utero-ovarian artery the lateral cervical triangle is simply penetrated at the median border (or cervico-vaginal border). In the author's operation of endometrectomy and partial myomectomy the lateral cervical triangle (2, 19, 4) is not penetrated or opened. Not only the long cervical loop (2, 3, 4) aids in vaginal hysterectomy but also the capacity of the spiral segment of the utero-ovarian artery to elongate distalward by means of the traction forceps fixed to the cervix.

State Preventive Medicine—Its Progress and Influence.

Address before the Minnesota Sanitary Conference held at St. Paul and Minneapolis, January, 1902

By Franklin Staples, M. D., President Minnesota State Board of Health.

In presenting to the conference at this time a few thoughts on state preventive medicine, I desire to call especial attention to certain important results of the same, which are now seen to have been of an educational character, and, as such, to have had their part in aid of the great progress in public sanitation now witnessed. In this the field of observation is now one of vast extent, and the review and brief mention here of facts and features must be more for illustration than otherwise—a small part for the great whole.

We can best understand and account for much that now appears in this, as we can in other departments of governmental service, by a glance at the history. The whole period of state medicine proper, in this country, has been less than half a century. Time was required for its establishment and early advancement; but in the more recent years of its history the growth, both in its rapidity and magnitude, has been phenomenal. The beginning was in this way: The governor of the state of Massachusetts, by authority of an act of the legislature, in 1849 appointed a committee of three citizens to prepare a plan for a sanitary survey of the state. This was done with reference to further contemplated action—that of establishing a system of sanitary control. Such men as Lemuel Shattuck, Jehiel Abbot and Nathaniel P. Banks—later governor of the state—were made to constitute that first committee. These men of the old Bay State, whose names and works have come to these later times for good, were known as having, for the time, advanced ideas of state sanitation and the advantages thereof. They were true representatives of a class, then not as numerous as now, whose minds were alive to the needs of the state and the nation in the great matter of public health, and their good works were not wanting. There were, however, obstacles in the way of immediate procedure. To furnish informanion to the public mind was found to be the first requirement. The practical working of what was then sought for, and what was in time to come, was needed to fully inform the people of their wants and how to meet them.

The First State Board.—Twenty years were allowed to pass before the Massachusetts State Board of Health, the first in the country, was established and began its work. This was in 1869. What public provisions had been made in any state before this time had been of a temporary character, to meet special emergencies. Such had been the case at one time when New Orleans was protected by quarantine against an invasion of yellow fever. This and a few other examples may, perhaps, be regarded as early indications of the coming of state medicine, and had something to do in preparing the way. The Massachusetts board was the first one so established and equipped as to be able to do such good general work as to secure for itself a permanent place in the public service. It is now seen that this early service was useful in an important way, by furnishing object lessons in practical sanitation to states and communities at home and abroad. The lessons at first were necessarily of a primary character. The progress of late years has developed and extended into great departments, and the higher and wider education demanded has been rendered possible by the advancement of modern science.

The great whole could not be seen at first. Time was required, as in other good building, to lay well the foundations and to rear the structure. Eight years were found necessary for making the next 10 boards in as many states, the state of Minnesota being one of the number. The Minnesota State Board of Health came into existence in 1872. About that time the extension of organized and authorized means of preventive medicine for the country, principally in the shape of state boards of health, became more rapid and complete.

The Outlook at the Centennial Year, 1876.—If progress was necessarily slow in the beginning, the disadvantage was more than compensated for by the wonderful developments of later times. For this the prophetic words of the pioneer sanitarian of Massachusetts, Dr. Henry I. Bowditch, are remembered. In his memorable address before the international medical congress of that year, at Philadelphia, his words concerning the story of then and thereafter were of great facts which history has truly verified. He said: "In its medical and social ideas the past century easily divides itself into three unequal periods, viz.: I. From 1776 to 1832, the era of theory and dogmatism. II. From 1832 to 1869, that of strict observation, and of bold—often reckless—skepticism. III. From 1869 to 1876, which is destined to continue and progress while the nation itself lives, the noblest and most beneficent of all, viz.: that in which the profession, joining heartily with the laity and aided by the material and intellectual resources of great states, will study to unravel the primal causes of all disease with the object of preventing it. It is the epoch of state preventive medicine." Since these words were spoken to the congress of the nations assembled in this country, a quarter of a century has passed. What was then prophecy is now in history. It has been our happy privilege to witness the fulfillment. Two conditions made, in these words, to characterize the present period—that of preventive medicine—deserves not only our thoughtful attention, but our admiration, viz., first, the union of laity and profession in the work of preventing disease, of elevating the standard of public health; and second, what is contained in the words, "will study to unravel the primal causes of disease, with the object of preventing it." Could the sanitarian of 1876, in his vision of the great future, have had in view the essentials of preventive medicine in its present estate? Was the part of state laboratory work in the diagnosis and in the pathology of infectious disease, and all that has come from the knowledge acquired, then anticipated?

The State or the Nation?—It has been a question whether the sanitary control of a country is better secured when all power is vested in the nation, or in the different states. The former plan appears in this department of government, in Great Britain, France and Germany. The United States of America is composed of a federation of states. It occupies the great part of the North American continent, and recent possessions extend it to other lands and climates. On the continent the different states, situated as they are, necessarily have a variety of needs in the matter of sanitation. Different state boards, together with their important general work, have made certain specialties as aids in the general advancement. The board of Michigan, by its able secretary, led the way in teaching the world the importance of vital statistics, and how the same could be made instructive in the matter of directing preventive means. The board of the state of Illinois put in motion the reform which resulted in elevating the standard of medical education. This work has for some time been given in the states to a special department of state government, but the Illinois State Board of Health has the credit of the initiatory work.

In addition to, and greatly in aid of, what is done in and by the states, is the work of sanitation now done by certain national departments of the public service. These are, first the marine hospital service, so called because of its former principal function in the government service; the national agricultural department—this especially through its bureau of animal industry—and the war department. The heads and chief officers of these divisions of government are informed, and are largely experts in practical lines of sanitary science. Original investigations, reports and publications by each of these departments have become important sources of practical information to the general public, as well as to the special sanitarian.

The great state of Minnesota is largely an agricultural and stock-raising state. There are always more or less diseases among animals, and sometimes special prevalences of such diseases exist which require authoritative investigation and management. It is necessary for the state board of health to make its veterinary department an important one. This necessity has been felt especially during the last two or three years. Stock raisers, shippers and purchasers have asked for the aid and protection of the board of health. Fortunately, of late years the study of the nature of these diseases, as well as the infectious diseases of man, has been greatly aided by the efficient work of the laboratory department. In the sanitary point of view, diseases of animals are important because of the communicability of many of them to man, and, as suggested above, are important in seriously affecting a legitimate business. A laboratory department has now a prominent place in the sanitary boards of many states. In these the government has been able to have its part in the work of pure science, and in turn has enjoyed the practical benefits of this work. We know more than formerly of the kind of quarantine required in specific, infectious diseases, the kinds of prevention required, and the meaning of immunity.

The present general outlook clearly shows that no material change in the state or general government functions could be an improvement in the country's sanitary work.

Lessons from Inspection Service.—

An essential part of local sanitary work is the authoritative inspection of persons and premises. The inspector enters the premises of a household where, perhaps, the existence of some form of disease has been reported. He observes a defect, and says at once: "This fermenting, unsanitary pool of kitchen slops by the side of the back door must be at once removed, and the place put in sanitary condition." Further, "I will go into the basement and see if there are any decaying vegetables or other matter. I will examine the ventilation of this house. I will measure the distance from the well to the privy vault." This procedure of the officer, and the subsequent report to the owners and occupants proves to be not only the cause of immediate sanitary improvement, but an effective means of education in the matter of disease cause and prevention. Such examinations and directions are made and given by health authorities for school and other public buildings and premises, as well as for private homes. Such service, intelligently and faithfully done, tends to educate the public mind in matters pertaining to the preservation of life and the advantages of purity in life surroundings.

Current Literature.—The literature of sanitation throughout the country has come to be immense in quantity and excellent in quality. The American Public Health Association publishes its proceedings, reports and papers in quarterly volumes, which are furnished to all members. Those of the National Association of State Boards of Health are published annually. The annual reports of state boards contain a large amount of literature, not only of local but of general importance. There are frequent bulletins, containing special reports, issued by all state boards. The sanitary journal literature has assumed great importance. The pioneer journal of this kind is the Sanitarian, published at Brooklyn, New York. Moreover, for the general educational advancement. the time is now when we have departments of sanitary science in many of our colleges, equipped for instruction in this department of study and practical work.

We are living in an era of public sanitation, the bright outlook in which shows that, in the higher civilization of the world, this must long continue. The little parts that we, as individuals, may have in the work will have their places in the world's great progress.

Notes on the Use of Tannopine in the Summer Bowel Troubles of Children.*

By Caryl B. Storrs, M. D., Minneapolis.

My attention was first called to tannopine by an article entitled "Enterocolitis," by Dr. William E. Fitch, of Savannah, Ga., in a recent number of The New York Medical Journal. The article aroused my interest in the drug, for it was used in the treatment of a line of ailments for which I knew no ideal medication. I procured, therefore, a supply of tannopine, which is manufactured by Friederich Bayer & Co., of Elberfeld, Germany; the makers of trional, sulfonal and several of the newer drugs of value. Tannopine is an almost impalpable brown powder, odorless, tasteless, and readily miscible with—though not soluble in—water. These qualities render it easily administrable to infants and young children, and among the many sensitive stomachs into which I have introduced it, it has been rejected by one only. In addition to its astringent action it has the great advantage of being a decided intestinal antiseptic; thus combining qualities to obtain which otherwise, necessitates the administration of a complicated compound of several ingredients, with its chances of impurity or careless compounding.

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*Read before the Academy of Medicine, Kalamazoo, Michigan.

In his article in The New York Medical Journal Dr. Fitch says:

"Last August I reported my experience (see Georgia Journal of Medicine and Surgery, Vol. V., No. 2), with a drug which approaches very near to an ideal disinfectant. It is a drug of great value. I refer to tannopine. As the name implies it is a condensation product of tannin, 87 per cent, and hexamethylene-urtramine (urotropin), 13 per cent; and has for its formula $(C H_2) N_4 (C_{14}H_{10}O_9) 3$. It is a light brown, tasteless, slightly hydroscopic powder, nearly insoluble in water, weak acids, alcohol and ether; soluble in weak alkalies, which should always be remembered when prescribing.

"To understand the mode of action of tannopine, it is well to bear in mind at the outset that it is not absorbed or decomposed in the stomach, and only separates into its constituents, tannin and urotropin, under the influence of the alkaline intestinal contents. The tannic acid of the compound unites with the albuminous substances, forming albuminates; contraction of the connective tissue results, diminishing reflex activity and sensibility of the muscular tissue. Urotropin, the second constituent of this division, which takes place in the alkaline intestinal contents, according to some investigators, Cohn and others, acts as a disinfectant, and has some reputation as a drug used to increase the secretion of urine."

Following Dr. Fitch's suggestion I exhibited tannopine by the combined methods of mouth administration and intestinal lavage, using at first regular doses ab ora for one or two days, but in my later cases gradually introducing less into the stomach and relying more upon the high intestinal injections. I satisfied the well grounded prejudices of grandmothers and other medical amateurs by giving the ever valuable and gentle placebo, or a mild antiseptic; a weak solution of listerine, for example. In every case, however, I inserted a soft rubber catheter at least three-fourths of its length into the lower bowel, washed the bowel clean with boiled water cooled to the temperature of the blood, and then injected through the catheter about ten (10) grains of tannopine thoroughly stirred into a third of a cupful of the blood-warm water. The injections were made with a syringe holding about three drachms, and after each emptying of the little syringe I moved the catheter a trifle, that a greater surface of the intestinal walls might be reached by the mixture. The above method of treatment as a regular procedure has proven in my experience of sixteen cases, an ideal one for the summer bowel trouble of children. I insisted in every case upon a positive sterilization of the food. This has usually consisted of milk and limewater, with variations as occasionally demanded, of arrow-root, simple gruels, or one of the prepared infant foods. The physician's intelligence must meet individual requirements with necessary modifications. The treatment has been equally satisfactory in adult cases though in these I have relied almost entirely upon administration by the mouth. The adult dose of tannopine is from 12 to 15 grains, the dose for a child, 3 to 8 grains. These are administered four or five times daily, though in many cases two or even one full dose only, will be required. A season of several severe cases of cholera infantum and allied conditions, with but one death, and that from a complication of meningeal inflammation, encourages me to a great faith in tannopine.

Involuntary Micturition in Children.

By G. Frank Lydston, M. D., Chicago, Ill.

Involuntary micturition in children, especially the nocturnal form, is by no means so simple an entity as some would have us believe. The term enuresis is often made to include a variety of conditions which are alike in only one respect, namely, the occurrence, with greater or less frequency, of involuntary micturition. Conditions of irritation identical with those producing similar symptoms in the adult are very often classed in children as enuresis. This diagnostic fallacy is often responsible for serious neglect or more or less profound pathologic disturbance of the genito-urinary tract in children.

Enuresis should properly include only those cases of involuntary micturition in which the condition is purely a symptomatic one, there being no local disease of the urinary apparatus to account for it. This variety of involuntary micturition in children is divided by Ultzmann into enuresis diurna ,enuresis nocturna and enuresis continua, the latter term implying the form in which involuntary micturition occurs both day and night.

Involuntary micturition from sources of direct irritation in children usually alternates with frequent voluntary micturition. Conditions, however, which in the adult would give rise to frequent voluntary micturition may give rise to frequent escape of urine in children, which is so obviously involuntary that a mistake in diagnosis may readily occur. Among the sources or direct irritation producing involuntary micturition in children may be mentioned pyelitis, renal tumors, renal calculus, hyperacidity of the urine incidental to lithemia, phosphaturia, which is usually associated with general debility and malnutrition, vesical tumor, or calculus. Reflex irritation producing involuntary micturition is most likely to consist of preputial abnormalities or contraction of the meatus.

Enuresis is unquestionably a neurosis. I do not agree with Ultzmann, however, in the view that it is always a motor neurosis, believing that it may be either motor or sensory. The condition may be due to a hyperesthesia of the sensory nerves and apparatus of the vesical neck, or to an inhibition of contractile power, or even a paralysis of the vesical sphincter, i. e., the membraneous urethra or true vesical neck. The latter condition, however, is the more frequent of the two. The various conditions of debility and malnutrition, such as scrofulosis, rickets and anemia, unquestionably bear a certain relation to enuresis. Children in whom the motor mechanism in general is well developed and the tonicity of the nervous system unimpaired, are least likely to suffer with this disease. It must be remembered, however, that in many instances children who are otherwise very healthy are affected by it. Here a local disturbance of muscular tone, or some reflex or direct cause of urinary excitation may account for the enuresis.

In my experience I have found that in well nourished and robust children affected by enuresis local causes of irritation are more likely to exist than in children of inferior physique.

The precise conditions which give rise to true enuresis are rather difficult to determine, as might be inferred from the variety of opinions which have been expressed upon this subject. Trousseau, Bretonneau and Desault have been inclined to attribute enuresis, not to general debility, but what they rather vaguely term abnormal relations of the bladder and its neck. Desault asserts that sudden violent contractions of the vesical detrusors which would awaken the adult fail to awaken children from the sound sleep which is their lawful and fortunate heritage. As Ultzmann says, however, this explanation would hold good rather in cases in which involuntary micturition is due to cystitis, pyelitis or stone.

Gursant advances the hypothesis that there exists a congenital weakness of the sphincter. This may apply to some cases, but certainly is not true of all, for a single application of the faradic current or a half dozen spinal injections of strychnia often serve to cure enuresis, which certainly would not be the case if the disease were due to a congenital muscular weakness.

Some authors assert that enuresis always is due to hyperesthesia of the vesical fundus or of the vesical mucosa in general, which entails urinary outflow as soon as the bladder has been distended to a certain degree, the extra activity of the renal functions in children completing the chain of explanations. This theory probably holds good in a certain proportion of cases.

Lebert, the most fantastic theorist of all, believes that during sleep there is a certain degree of narcosis of the sphincter in the affected children.

Ultzmann's idea is that enuresis is a neurosis, characterized by a disproportion between the innervation of the detrusors and that of the sphincter, the sphincter especially being very imperfectly innervated. He claims that this condition is normal from the expiration of the first year to the completion of dentition, enuresis representing merely the continuance of the infantile condition. He says: "That enuresis consists only in an imperfect innervation of the sphincter of the bladder is shown by the results which are attained by electrical treatment. There are cases, namely, which are already cured after the first faradization of the sphincter, and remain so henceforth. Such a therapeutic result can only be explained by imperfect innervation and never by imperfect development of the sphincter." Enuresis may be a vesical manifestation of chorea.

It would be difficult to give a terse and lucid explanation of the purely neurotic form of urinary incontinence in children. That it is due to a disturbance of the equilibrium of the urinary mechanism would seem to be evident enough, but precisely in what this disturbance of equilibrium consists in any given case may be difficult to determine.

Enuresis most frequently occurs between the ages of three and ten or eleven years, although it is a matter of common experience that it often occurs well past puberty. It is claimed by Ultzmann to be found indifferently in either sex. I am inclined to agree, however, with those holding that it occurs more frequently in the male, in whom sources of reflex irritation are more often found. In all cases of enuresis, either male or female, sources of reflex irritation must receive serious consideration, abnormal preputial conditions in the male being sought for with especial care.

Diagnosis.—In all cases of involuntary micturition in children great care should be taken, first, to differentiate the cases in which a pure neurosis exists from those characterized by pathologic conditions of various kinds producing local irritation. Where the condition is shown to be a pure neurosis, possible sources of reflex irritation should be carefully sought for. Success in treatment depends altogether upon the care exhibited in the differentiation of cases. Simple enuresis should never be taken for granted. The urinary organs should be carefully explored. Stone, especially, should be carefully sought for. The rectum should be examined with reference to possible sources of reflex irritation of the urinary organs, and with special reference to the existence of hemorrhoids and ascarides recti. The urine should be carefully examined as to its possible properties of irritation. Phosphaturia, oxaluria, lithuria, diabetes mellitus or diabetes insipidus may explain the trouble. The general condition should be taken into careful consideration and the source of urinary irritation and malnutrition determined if possible. Digestive disturbances will often be found, the correction of which will cure the enuresis completely. The one obstinate case coming under the observation of the author, the condition was found to be due to a well marked phosphatic diathesis, as shown by constant phosphaturia and a chalky degeneration of the teeth.

Treatment.—As suggested above, one of the first duties of the physician is to correct any condition of malassimilation or debility which may exist. Sources of local irritation having been excluded, the condition should be treated as a pure neurosis. One of the best remedies at our command is the daily injection of full doses of sulphate of strychnia in the lumbar region.

In cases of involuntary micturition dependent upon chorea the usual measures for the correction of that condition should be adopted: cold bathing, massage, cod-liver oil, arsenic and antispasmodics come into play here. Such remedies as the bromides, valerian, assafetida and camphor are of special service. A remedy which has proved of special service in the forms of enuresis due to hyperesthesia of the vesical neck, is tincture of cantharides in minute doses. Where hyperacidity of urine exists this may be combined with acetate or citrate of potassium or lithium. The lithium salts are of special value where there is gouty or rheumatic diathesis. The salicylates also come into play here. Such tonics as the mineral acids, quinine and iron, with a liberal dietary of fat, and perhaps the administration of cod-liver oil, are demanded in many cases in which malnutrition is a prominent factor. Ergot is very often useful. A very valuable remedy in purely neurotic cases and especially in those accompanying chorea, is santonin in full doses, this independently of the existence of intestinal worms. Where those exist this remedy is of course a sine qua non. In cases of phosphaturia a diet of proteids with the administration of mineral acids has a much more limited range of value than authorities on therapeutics seem to believe. Like many other remedies, this has been handed down year after year by various authorities on therapeutics, since Trosseau and Bretonneau, until it is considered by the majority of practitioners little short of specific. So far as my experience goes, and it has been by no means limited, the value of this remedy has been greatly overrated. While it does act favorably, it is in many cases of only temporary benefit.

Where the involuntary micturition is due to the irritation of saccharine urine, as in diabetes mellitus or the rapid entrance of urine of low specific gravity into the bladder, as in diabetes insipidus, the primary condition demands correction. The author takes the liberty of mentioning here an observation which he has made, to the effect that urine of extremely low specific gravity and consequent non-irritating character is often not so well tolerated by the bladder as is a more concentrated and consequently more irritating urine. The reason for this seems to be the fact that in cases of diabetes insipidus and allied conditons the urine is secreted so rapidly that the bladder does not have time to accommodate itself to its contents. The urine trickles into the viscus so fast that it is, so to speak, taken by surprise, and is consequently stimulated to contract. I have noticed this phenomenon very frequently in patients whose urine was extremely diluted in consequence of the ingestion of large quantities of pure water, yet frequent and scanty urination was produced.

In by far the majority of instances local treatment is required, and its neglect is the explanation of frequent failures in the management of this condition. The necessity for local treatment in cases of involuntary micturition due to an irritated condition of the genitourinary tract is obvious; thus, an operation for stone, the application of silver to the vesical neck, or surgical intervention for the relief of diseased kidneys may be necessary.

The urethral sound is one of the most valuable measures for the treatment of a large proportion of cases of involuntary micturition in children. It acts in three ways. First, by blunting the sensibility of the nervous supply of the vesical neck, thus correcting hyperesthesia. Secondly, by decongesting the mucous membrane of the deep urethra, i. e., the vesical neck. Thirdly, in cases of a purely neurotic type it stimulates the relaxed sphincter vesicae to contract and, so to speak, exercises it. The resentment which the muscle offers to the entrance of the sound produces a stimulation of nutrition of the muscle, increases its bulk and adds to its tonicity, thus enabling it to resist with more success the egress of urine. Many otherwise obstinate cases are cured very readily by systematic sounding. All sources of reflex irritation should be relieved; the prepuce, if phimosed and redundant, removed, and all adhesions separated. The meatus, if narrow, should be cut. Carunculæ of the urethra and preputio-clitoridal adhesions may demand attention in female children.

Next to the sound, the most efficacious method of treatment in the purely neurotic cases is the injection of strychnia beside the spinal column in the lumbar region. The dosage is of course to be in proportion to the age of the child, but as a single daily dose is given a larger quantity can be administered than where it is given internally three times daily. The injection should be made deeply into the substance of the erector spinæ muscle and as close to the spinal column as possible. In several instances in the author's experience a cure has resulted from a short course of these injections. In one instance, the case of a girl twelve years of age, the daughter of a physician, cure resulted from the succession of three injections in the lumbar spine of 1-15 of a grain of sulphate of strychnia.

Where vesical catarrh is a factor in the cases, and especially in cases where the urine is alkaline or neutral, urotropin is often of value in connection with the usual local measures for the correction of the condition.—Pediatrics.

MEDICAL MISCELLANY.

THE AMERICAN CONGRESS OF TUBERCULOSIS. The third annual session of this congress is announced to be held on the 14th, 15th and 16th of May, 1902, in the city of New York, in joint session with the Medico-Legal Society. There will be two sessions each day, and no evening session, except on the 15th, when the banquet will be given. This will enable delegates from distant states and countries to enjoy the amusements and attractions of the city.

Arrangements will be made with railway companies for a reduced rate of fare, the details of which will be announced to the delegates.

In addition to the vice presidents chosen at the sessions of May 15 and 16, 1901, the executive committee have authorized the appointment of three vice presidents from each state, country or province, and an honorary vice president from each. Under this authorization about 70 additional vice presidents have been named who have already accepted, but in some of the countries and states all of them have not yet been named. Of the honorary vice presidents, all but two of the provinces of Dominion of Canada have accepted already, and six from governments. Among those who have accepted from the American states already, five are governors of states and others high public officers.

When completed, these officials will be all duly announced. There will be, aside from all papers of a miscellaneous nature, four symposiums, arranged each to occupy one session of the body, viz.:

1. Preventive Legislation, embracing the social, municipal and state aspects of tuberculosis.

2. Tuberculosis in its Pathological and Bacteriological Aspects.

3. The Medical and Surgical Aspects of Tuberculosis.

4. The Veterinary Aspects of Tuberculosis.

These will each be in charge of a committee, who will arrange for the opening papers, and for those who participate. These committees will be arranged with great care and duly announced.

A large number of the enrolled members have already announced the titles of their papers for the sessions for 1902, and a still larger number have sent their names to the secretary, who will contribute papers and send the titles later.

The presidents of the Central and South American republics, and all governments on the American continents, have been invited to send delegates, and to name suitable persons to act as vice presidents, and their men of science requested to enroll and contribute to the work of the congress, many of whom are already represented by delegates. No attempt will be made to classify and arrange these until the programme can be announced, but, if thought advisable, a preliminary announcement will be made, one month before the annual meeting, of the titles of papers and names of authors.

Those who were named as delegates by the governors of states, or medical or scientific bodies, for the session of 1901, are cordially invited to enroll for the congress of 1902. The enrolling fee will be $3, which will entitle the member to the bulletin of the congress for 1902.

All medical bodies, and scientific or legal associations, or associations of the bar, are invited to send delegates to the congress, who will be given the rights of the floor, and a vote at the session.

There will be named a local committee for the session, of strong names, who will do everything in its power to make the occasion one of great interest and pleasure to enrolled members.

The enrollment is open to members of both professions in every state, county or province on the continents of America, in the western hemisphere, and in American waters, and papers are promised and will be solicited from all who are interested, in foreign countries.

For details and enrollment, address
CLARK BELL, Secretary,
39 Broadway, New York City.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION will hold its twelfth annual meeting at the Kaaterskill, Catskill Mountain, N. Y., on Tuesday, Wednesday and Thursday, September 2, 3, and 4, 1902. The officers of the association are: President, Dr. Fred H. Morse, Melrose, Mass.; Secretary, Dr. George E. Bill, Harrisburg, Pa.; Treasurer, Dr. R. J. Nunn, Savannah, Ga.

THE MINNESOTA STATE SANITARY ASSOCIATION. This is a new association which had its birth at the State sanitary conference in Minneapolis on the 15th and 16th of January, of which the following officers were chosen: Dr. H. M. Bracken, secretary of the State Board of Health, president; Dr. J. W. Robinson, Duluth, Dr. A. E. Spaulding, Luverne; J. J. Flather, University of Minnesota, vice-presidents; Dr. E. H. Bailey, Lake City, recording secretary.

There will be eleven committees in charge of the various details of sanitary work, as follows:

Programs, committee on municipal and sanitary engineering, committee on tuberculosis, committee on infectious diseases of men, committee on infectious diseases of animals, committee on school hygiene to include recreation and baths, committee on women's work in sanitation, committee on disinfectants, committee on vital statistics, committee on vaccination and committee on legislation.

Appointments to these committees, three members for each, will be made by the president-elect.

EXUDATE FROM SOLID PNEUMONIC LUNG A FERMENT. A most interesting discovery is that by Fr. Muller of the fact that the resolution of the exudate of a solid pneumonic lung is the result of the action of a ferment. This ferment seems to be brought into the exudate by the great mass of leukocytes whose migration makes the transition between red and gray hepatization. Before this change to gray hepatization the lung is solid and contains no ferment which can liquify the exudate. From that time on, however, the exudate is digested by a powerful ferment which rapidly liquefies it, whether or not the crisis has occurred, for the resolution is a phenomenon evidently quite independent of the crisis, since it may be well advanced before, or begin after that event. That this ferment has a powerful action is shown by the fact that in the urine in one day may appear the products of the absorption of 800 grams of digested exudate. The auto-digestion of the pneumonic lung shows that the products of the digestion by this ferment are quite the same as those tryptic digestion, leucin, tyrosin, in quantities, as well as the hexone bases, lysin, arginin, etc. This ferment forms for itself an acid medium, hence differs from trypsin. The fate of the pneumonic exudate has always before this been unknown, and "part coughed up and part absorbed" has been the common explanation. Professor Muller's proof that the whole process is that of digestion by a ferment and absorption of the products of digestion makes the phenomena of resolution much better understood and more interesting.—Phil. Med. Journal.

WHEY IN ENTERIC FEVER. Dr Prideaux Selly gives whey in enteric fever in preference to milk, because the latter in many cases forms a hard, cheesy curd in the stomach, and the bacillus typhosus breeds rapidly in the milk, and toxins are produced. In 73 cases he claims the death rate was reduced from 15.5 to 2.7 per. cent. The whey contains about one-half as much solids as the milk, and consists of a solution of milk-sugar, with small amounts of fat, albumin and salt, four pints being a sufficient diet for an adult typhoid fever patient. It is prepared by stirring two teaspoonfuls of rennet into a quart of milk, warming slowly until it curdles, then break up the curd and strain through fine linen. The doctor also believes in the good effects of alcohol, and gives as much as 24 ounces in a day of whisky or brandy if the heart is weak, and for grass-green defectations from 5 to 10 grains of salol. The cold bath was not used, but the patient was not too warmly covered. If the temperature rose above 103 or 104 degrees F. he had him sponged and placed under a cradle, with one or two ice bags suspended inside and a sheet over the top. No treatment, he thinks, will prevent an occasional hemorrhage from ulceration, but he suggests that large doses of salad oil might saturate the sloughing Peyer's patches, and by stopping the supply of nitrogen to the bacilli prevent further ulceration.—London Lancet.

TREATMENT OF RICKETS. The diet in rickets is of first importance. If this were carefully looked to the majority of cases could be cured with out medical treatment. From a study of the stools one can generally tell whether the food is at fault, and what element of the food is the cause of the trouble. It is not the number, but the character, of the stools which must be considered: normal stools are always homogenous, like mush.

It is an invariable rule, if the body is ailing to weaken its food, reduce the amount and stop the food the baby cannot digest. In 99 cases out of 100 it is the milk. Instead of varying the percentage, reduce the amount of milk or stop it altogether for 48 hours, in the meantime giving water. The white of one egg beaten up in eight ounces of water and flavored with 10 to 20 drops of aromatic spirits of ammonia is a good substitute, and contains about the same percentage of proteids as does the milk. The ammonia has a slightly stimulating action on the stomach. Barley water or thin wheat flour gruel are often useful substitutes. For a baby six months old, a tablespoonful of beef blood in 3 or 4 of water may be given. When the baby is again put upon milk, begin with a very high dilution and increase gradually.—Henry D. Chapin (Post Graduate, N. Y., Vol. 16, No. 10).

THE MISTLETOE IN MEDICINE. Apparently a new medicinal property has been discovered in the mistletoe by M. Deguy, who began his investigations four years ago in the hospital service of M. Huchard and that of M. Labadie-Lagrave. It is in cases of albuminuria that M. Deguy thinks he has found the plant useful. He gives daily one or two claret glasses of a filtered infusion of the plant in white wine, or the powder in daily amounts of from 15 to 30 grains, but he prefers the extract made into pills, with the addition of a little tannin, each pill containing 1½ grains extract, and five or six pills to be taken daily. When, under the influence of a milky diet, he says, the percentage of albumin in the urine has been brought as low as that diet is capable of rendering it, a still further reduction is attainable by the use of the mistletoe. Moreover, if the drug is employed concurrently with the milk diet from the outset, the diminution of the amount of albumin voided with the urine seems to be hastened. This impression he has acquired from comparative observations of different attacks in the same patient.—N. Y. Med. Journal.

INDIGESTION. The Medical Record cites the following from J. M. Carter:

℞ Acidi carbolici, gtt. vj.
Tinct. gelsemii (U. S. P.),
Glycerini,
Vini colchici,
Tinct. opii camphorata, of each, f℥ss.
Elix. simplicis, f℥j.
M. Sig.: ʒj before each meal.

NIGHT TERRORS. "The causation of night terrors, which has so often been largely attributed to various neuroses, cortical epilepsy, hysteria, etc., is brought down with much show of reason to the simple basis of dyspnœa in E. Graham Little's paper. His conclusions are quoted:

"(1) Night terrors are in the great majority of cases caused by disorders productive of moderate but prolonged dyspnœa.

"(2) A preponderating number of cases are found in rheumatic subjects with early heart disease.

"(3) A considerable proportion of cases are due to obstruction of nasal cavities and fauces.

"(4) Digestive disturbances do not play the important part in causation that is often assigned to them.

"(5) The evidence for their casual connection with epilepsy or allied neuroses is scanty.

"(6) The attacks occur in the subconscious stage of early sleep, and are confined to young children under puberty."—Progressiv Medicin, August, 1900.

RELATION BETWEEN THE FEMALE SEXUAL ORGANS AND THE NOSE. Dr. Arthur Schiff, in the Wiener Klinische Wochenschrift, January 17, 1901, first quotes from Fliess' work upon this subject, in which he calls two areas upon the mucous membrane of the nostrils (the anterior part of the lower turbinate, and the tuberculum septi), "genital spots," since they become hyperemic during menstruation. Besides, in cases of dysmenorrhœa, he says that cocaining the lower turbinate causes the hypogastric pain, and cocaining the tuberculum causes the lumbar pain to disappear. Further, should this be so, the dysmenorrhœa can be permanently cured by cauterizing the "genital spots." Not only is this true in a nervous dysmenorrhœa, but in many of those cases associated with disease of the sexual organs also. In pure mechanical dysmenorrhœa, however, associated with stenosis of the cervix uteri, anteflection, etc., this is not the case. Schiff tested this in 47 cases, in 34 of which two drops of a 20 per cent solution of cocaine upon these genital spots caused the pain of dysmenorrhœa to disappear temporarily, not only once, but whenever applied. Nine of the 13 negative cases showed gynecological conditions. His tests numbered over 200. They were carefully made, suggestion being excluded. When water was used, and not cocaine, the pain persisted. By using other anæsthetics (weaker cocaine solutions, suprarenal, etc.) he shows that this is due to anæsthesia of the "genital spots." In 12 out of 17 cases of dysmenorrhœa cauterizing the genital spots was followed by permanent recovery. Further experiments showed plainly the close connection between the hypogastric pain and the mucous membrane over the lower turbinated bone.—Philadelphia Medical Journal.

POISON IN "PATENT" MEDICINES. A physician in Manhattan advocates an authoritative analysis of proprietary medicines, in the public interest, and he urges that the Society of Medical Jurisprudence take the matter in hand. It is believed that the county medical societies have power to deal with cases of this kind, where quackery is suspected or where nostrums of an injurious character are freely sold, but the societies have always been bashful about meddling with commercial interests, and the boards of health never do anything to restrain the sale of patent medicines, so-called, that contain alcohol and opium. According to Prof. Sieberg, some of the proprietary medicines are really dangerous, and should be kept out of the drug stores. Drugs are more extensively adulterated and substituted, he says, than is generally supposed, and he is indignant that persons stricken with disease should be subjected to the danger that arises from the cupidity of manufacturers. A purely vegetable tonic recommended for the cure of drunkenness, he finds to contain 41 per cent of alcohol, and is a source, therefore, of merry jags. Some other compounds are so charged with opiates and poisons that if the contents were accurately known the druggist who sold them might be sent to jail. Cough medicines, he found, often contain morphine, and face lotions, he said, frequently poison the user with mercury and lead. He would, therefore, compel the makers of proprietary medicines to submit them to state chemists for analysis, with a view to keeping them out of the market if found injurious. The druggist is supposed to be ignorant of their contents; hence he is not amenable to the law against the sale of poisons; but the manufacturer ought to be willing to make known the contents of his bottles if they are what he claims them to be. Makers of honest medicines would thrive under the proposed restriction, while of the other class, the smaller we can make it the better.—Brooklyn Eagle.

WHAT WAS IN HIM? "Children," said the teacher while instructing the class in composition, "you should not attempt any flights of fancy, but simply be yourselves and write what is in you. Do not imitate any other person's writings, or draw inspiration from outside sources."

As a result of this advice Johnny Wise turned in the following composition:

"We should not attempt any flites of fancy, but rite what is in us. In me thare is my stummick, lungs, hart, liver, two apples, one piece of pie, one stick lemon candy and my dinner."—Baltimore American.

HEAVIEST BRAIN ON RECORD.—In a German psychological journal Professor Van Walsem gives a short description of the heaviest brain on record. The possessor of this ponderous organ was an epileptic idiot, who died at the age of 21. He began to walk at four years of age, never attended school, and was received into the institution at Meerenburg at his 14th year. He was an idiot of low intelligence, and of changeable but good-humored disposition. The senses seemed good and the muscular system well developed. He suffered from epilepsy, during an attack from which he died. The brain weighed 2850 grains and seemed to be a general enlargement. The cerebellum was regular in form. The spinal cord seemed slightly larger than usual and the spinal nerves bigger. On microscopic examination the ganglion cells of the brain seemed rare, the layers indistinct, the pyramidal layer scanty, the nerve centers everywhere indistinct. Neither the cerebral vessels nor the neuroglia were altered.

UNRECOGNIZED SYPHILIS IN GENERAL PRACTICE. In a learned discussion of the above topic in the December International Medical Magazine Dr. L. Duncan Bulkley summarizes as follows:

"First: Syphilis is certainly not a venereal disease in all cases, and the absence of any history of sexual exposure should never throw one off the guard, when there is reasonable evidence of the existence of the disease. In addition to the large number of instances of innocent marital and hereditary syphilis, there are a certain number of cases of extra-genital chancre, which must always be reckoned on when confronted with possible syphilis. Among a large number of cases of chancre which I collected from the clinics of Europe, extra-genital chancre was found to make 6% among the males and almost 12% among the females. Fournier, of Paris, found that in his private practice about 25% of the females had acquired the disease in a perfect innocent manner, while in my own private practice a careful study of the notes of cases shows that in 50% of females syphilis was innocently acquired. Allusion has already been made to the fact that in my experience extra-genital chancre is more common in males than in females. The question, therefore, of venereal exposure need not always be of importance in acquiring syphilis, and often those of the purest character may require careful and prolonged anti-syphilitic treatment.

"Second: Syphilis is often a very erratic disease and it is sometimes difficult to get a satisfactorily corroborative history. Not only may previous symptoms have been prevented or held in check by treatment; but even if left to itself some of the early manifestations may be very slight and escape notice, yet be followed by serious lesions. This is particularly the case in women.

"Third: Many cases of unrecognized syphilis have very severe later symptoms, involving great destruction of tissue and severe lesions of internal organs. This is due to the absence of previous controlling treatment. It has been a common remark that syphilis acquired by means of an extra-genital chancre was apt to be of a very severe character. It is furthermore these cases which are often overlooked.

"Fourth: Syphilis is such an imitator of other diseases that its presence may often be suspected when they present unusual or peculiar features. In such cases, careful study and analysis will often serve to determine the true nature of the trouble, but it may be difficult to obtain a perfectly satisfactory corroborative history. In many instances of late syphilis from innocent infection the sufferers do not at all suspect the nature of their disease.

"Fifth: As many of the late, often unrecognized, lesions of syphilis are the result of imperfectly treated early syphilis, it is desirable that the general profession and the laity be thoroughly convinced of the necessity of careful and prolonged treatment to cure the disease. Too often syphilis is treated in a superficial and hasty manner, which is neglected as soon as the symptoms disappear. According to all modern experience and opinion, this is wrong, and physicians should see to it that patients receive proper treatment for at least two years, in the manner now accepted and fully described in writings on the subject.

"Syphilis is a great, a very great disease, much more common than is supposed by many, and is worthy of the most careful study and consideration. while its manifestations are sometimes difficult to determine, there is no reason why with sufficient care and patience in its study and treatment there should not be fewer cases of unrecognized syphilis in general practice."

TREATMENT OF ASCITES. Dr. A. H. Bigg considers elaterin a very valuable drug in the treatment of ascites, providing it is used in a suitable combination like the following:

℞ Elaterin	gr. 1-15
Strychinine sulph	gr. 1-40
Spt. glonoin	gr. 1-200
Ext. digitalis	gr. ¼
Caffein	gr. j
Powd. cloves	gr. j

M. ft. in caps. No. j. Sig.—Give one every three to six hours.

The author says that he would boldly attack any case of ascites with the above combination with the confident expectation of rapidly removing the fluid without material discomfort and with no risk whatever to the patient. Where there is a tendency to nausea, one-eighth grain of cocaine or the temporary substitution of cocaine for the digitalis may be advisable. The treatment must be pushed vigorously so as to cause four to six copious evacuations until relief is obtained.—Medical Record.

SYPHILIS OF THE LIVER. Dr. Simon Flexner, of Philadelphia, says that the gummata are generally present on the surface of the liver under the peritoneum. There are three forms of syphilitic disease of the liver, viz., simple, interstitial and gummatous hepatitis. To these may be added amyloid degeneration. There has been no important improvement on Virchow's original classification. In 5,088 autopsies done at the Philadelphia Hospital there were 88 cases of syphilis of the liver. Of this number, 45 had interstitial hepatitis, 33 perihepatitis with gumma, and 7 had amyloid degeneration. In simple gummatous hepatitis ascites did not appear. Contrary to the general opinion formerly held, amyloid change might be resorbed under treatment.—Medical Record.

SYMPATHY A GREAT FACTOR. I am of opinion that sympathy is a great factor in the treatment of neurasthenia. Patients have often come under my notice of whom I have said to my colleagues that what they wanted was not so much medicine as sympathy. It is essential that the symptoms should not be scoffed at. To the patient they are very distressing, and if the doctor made light of them he was apt to lose the confidence of the patient; and if he does this he will in all probability fail in the treatment of the disease. Perseverance and tact are specially necessary, but attention to detail is absolutely important. I am accustomed in the treatment of my patients to plan out his life for him from the time he gets up in the morning until he goes to bed at night. The time at which his meals should be taken, and the quantity, are important, and as in many of these cases disturbance of the gastro-intestinal tract preceded the disease, improvement of the digestion and a daily evacuation of the bowels should be brought about. As cases of this kind are self-centered, the patient should be advised to employ himself in some way, either by gardening, riding, golf, etc. While the Weir-Mitchell treatment in a nursing home is of use in some cases, many, especially poor cases, can be treated equally well in their own homes. As regarded suggestion, I am doubtful whether hypnotism is of any use, but I believe that if I could inspire the patient with confidence that he would get well, it would undoubtedly help to cure the disease. I am of opinion that employment in the open air helps recovery by the healthy distraction it affords.—Fletcher Beach, M. D., in N. Y. Lancet.

TREATMENT OF SCARLATINAL NEPHRITIS—(Management of the stage of convalescence). In closing up an article in Pediatrics on "Scarlatinal Nephritis and its Treatment," Dr. Huber recommends the following treatment of the closing stage: "As long as albumin appears in the urine the patient ought to be kept in bed, or, if intractable, at least be confined to the house, in an even temperature, avoiding exposure or a display of too great muscular activity. The anemia must be combatted by means of light nutrition, food and iron internally. The functions of the bowels may be regulated by the use of salines or calomel. The myocardial weakness is to be treated by rest and strychnine in appropriate doses. The diet allowed must be easily digested and light in character. Plenty of water, a moderate amount of lemonade or carbo-water may be given. A failure to observe such necessary precautions in this stage is largely responsible for many a chronic nephritis in later years."

PASSING THE CATHETER. When you attempt to introduce the catheter into the bladder where the prostrate gland is enlarged, remember the sinus pocularis. Well, how will you avoid it? Oil the index finger of the right hand and introduce it into the rectum. After introducing your catheter hold it in the left hand and push it down until you meet the obstruction. Then follow the catheter with the index finger to its point —I mean the index finger in the rectum —gently raise it up, apply a little more force with the left hand, and ninety-nine cases out of a hundred you will be surprised to find how easily the instrument enters the bladder. I can say without boasting that I have never failed in this simple operation in my life, and it is seldom now that I ever draw blood or give a patient pain.

Never try to introduce a catheter into the bladder where the prostrate gland is enlarged without having the finger in the rectum to spread the lateral lobes apart, and lift the point of the instrument above the sinus pocularis.—Ex.

A CURE FOR ENURESIS. Dr. P. F. Barbour (Am. Pract. and News) gave boric acid to a child suffering from enuresis whose urine was found to be highly alkaline and offensive. The drug was given for the purpose of acidulating it, but it also relieved the urinary incontinence. Later he combined salol with it. The results have been so good that he now uses the combination in all cases of enuresis. He does not know of a case where it has failed after a thorough trial, and he has had ample opportunity to try it in a large dispensary practice. He does not, however, claim that it will cure every case.—Med. Summary.

TREATMENT OF SUMMER DIARRHEA. W. H. Robey in the Journal of Medicine and Science, August, 1901, says that the treatment is obviously: (a) To cleanse the bowel of the bacteria and their toxic products. (b) To give the remaining bacteria as unfavorable conditions as possible for further production. (c) To soothe the irritated intestine where the continuance of the condition makes this necessary. (d) To support the patient against constitutional symptoms, as fever, nervous irritability, etc., as in other acute diseases of childhood. (e) To guard against infection of others by isolation when possible, and by carefully washing the hands after handling the stools, in order not to infect other food and common household articles. Naturally, the smalll intestine must be cleansed by a purge, and for this purpose calomel 1 gr. was given in 1-10 gr. doses at half-hour intervals. It has been asked why castor oil was not given, since it has such soothing properties. In treating infantile diarrhea, especially in dispensary practice, one must try to accomplish as much as possible at the first visit for obvious reasons. The gastro-intestinal tract of the infant being in an irritable state, the oil is more apt to be vomited; whereas, I have never known this result with calomel; in fact, it will allay vomiting should that dangerous symptom be present. Furthermore, castor oil is such a common household remedy that it may have been tried already, while calomel in divided doses keeps the mother busy and aids her patience in carrying out the second important step in the treatment: starvation.

CARBOLIC ACID INJECTIONS FOR PILES.—George W. Gay, M. D., in a paper (Boston Medical and Surgical Journal), after emphasizing the fact that internal piles only should be so treated, thus describes the procedure:

The operation may be performed in the following manner: The patient is directed to sit upon the stool for several minutes, and strain as in the effort to evacuate the bowels. In this way the piles are distended and brought down to the anus. The patient then lies down upon his left side with knees well drawn up. With his right hand he raises his right buttock, and strains down again, while the operator gently opens the anus with the fingers of his left hand, in case the piles are not in plain sight. An ordinary hypodermic syringe having a sharp needle and charged with the solution is thurst into the pile, and one or two minims injected into its center. The needle is slowly withdrawn, and the piles replaced above the internal sphincter.

The introduction of the needle is not painful, and the carbolic acid causes only a slight burning sensation, which is of short duration. The patient goes about his ordinary business. The bowels are encouraged to move regularly, and no change is made in his daily habits.

The operation may be repeated in a week or later. I never inject more than two piles at one visit, and have never had occasion to repeat an operation upon the same tumor inside of a year, although there can be no objection to doing so, after the effects of the previous operation have disappeared, say in two or three weeks.

By way of summary it may be said that if the following points receive careful attention, relief more or less complete is pretty certain to follow this operation; a relief that in some cases will result in a permanent cure: (1) Inject only internal piles; (2) the solution of carbolic acid should not exceed 10 per cent; (3) do not repeat the operation under a week; (4) inject only one or two minims into each tumor; (5) inject not more than two piles at any one time; (6) promise relief only, and not a radical or a permanent cure.—Med. Rev. of Rev

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HOT AIR AS A THERAPEUTIC AGENT. Dr. Orrin S. Wightman, in the N. Y. Med. Jour., says:

Dry heat is a valuable pain reliever without any of the depressant effects common to drugs. In connection with constitutional and medicinal treatment we have in it a positive curative agent. It is a stimulant to rapid repair and absorption. It is one of the most valuable eliminative agents we possess. Where indicated, it possesses a sedative action on the nervous system obtained by no other means.

THE DIRT-EATING FANATICS OF ST. LOUIS. The newest and most singular of St. Louis sects are the dirt eaters, a community of 75 men and women whose Moses is William Windsor. The dirt eaters take every day a spoonful of dirt. Their leader believes that grit is necessary to every animal, and that because mankind will have no dirt in his food he is subject to many stomach troubles that no other animal has. So the dirt eater goes every day to his little sack of soil. He plunges a teaspoon in and brings it forth heaped with good old earth. He washes it down with a glass of water, smacking his lips and blinking his eyes as though no morsel ever tickled the palate of man so delicicusly as dirt.

The dirt eater is particular what sort of dirt he eats. This article of singular diet is technically a sand. It comes from the river bottoms, and is made up of many little particles of granite, marble, quartz and flint, well rounded with age. The chief dirt eater has the sand collected and sterilized, and he distributes it among his fellows at 25 cents a sack. The sack is small, but it holds a good deal of sand. So that daily dirt eating after the St. Louis fashion, costs about 10 cents a week. Dirt eating in St. Louis is six months old, and flourishes like a green bay tree.

ALCOHOL IN HOMEOPATHIC DOSES is alleged to be a muscle food, according to the report of Professor F. S. Lee, of the College of Physicians and Surgeons, of New York City. According to a telegram he gave the result of his experiments on the action of alcohol on muscle, before the biological section of the New York Academy of Sciences at the Commercial Club. He had found, he said, as had Professor Atwater, of Wesleyan University, that in certain proportions alcohol was essentially a muscle food, and that with its aid greater results can be obtained than under normal conditions. Professor Lee conducted his experiments on frogs' legs, in which the alcohol had been injected before amputation, so that the fluid might be evenly diffused by the blood.

Professor Lee found that when he used a definite amount of the spirit the legs, excited by the electrical stimulation, were able to put forth greater efforts than those not so treated. On the other hand, when too great an amount had been employed, the effect was exactly the opposite. He said his experiments demonstrated that, in proper proportions, alcohol was an unequaled muscle food, furnishing the power as well as the stimulation to greater efforts.

THE MORAVIAN NURSE. Few English tourists visiting Vienna can have failed to be attracted by the beautiful faces and vividly picturesque costumes of the Moravian nurses daily to be seen on the Ringstrasse and in the parks and gardens of the gay Austrian capital. But probably not one visitor in a hundred knows that the majority of these women come from a small district in Moravia, a large share of whose prosperity is directly due to these traveling foster mothers.

There are no more beautiful specimens of healthy womanhood to be found in Central Europe than the peasant girls in the fertile Hanna valley, on the confines of Moravia and Hungary. Their abundantly fair hair is of the most marvelously fine texture, and the delicate beauty of their complexions is the envy of many a stately court dame. Broad-shouldered, deep-chested and sturdily built, they are eloquent testimonials to the value of pure air, simple country fare and exceptionally moral lives.

The fame of the Hanna foster mother nurses has spread over the Austrian empire, and of late years has extended even across the Italian frontier. They demand and receive high wages, and only the rich can afford to employ them. Five pounds a month, and a present of 20 to 30 pounds at the end of their term of service is an average remuneration, and in addition they receive liberal outfits of clothing. Their work ended, the women go back to their homes, and many a Hanna peasant proprietor has laid the foundation of his fortune with the money earned by his wife in this manner.

There is no more favorite costume at the Vienna fancy dress balls than that of the Hanna woman, and for brilliancy of coloring and general effectiveness no peasant dress in any country in Europe can equal it. The holiday attire consists of a short, accordion-pleated skirt of scarlet or light blue, bordered with black velvet and narrow gold braid. With this is worn an apron of mull, or some equally thin white material, and the bodice is also white, with short sleeves. Over the bodice is a gorgeous jacket of brocaded velvet, sleeveless and cut V-shape in front. The head dress is a sort of mob cap, trimmed with lace and flowers and finished with bow and ends of broad ribbon, which reach to the bottom of the skirt. The boots, which lend the principal note of individuality to this dress, are of soft but thick leather, fitting the feet closely, have high heels, and reach to the knees in wrinkled folds, a feminine edition of the old Wellingtons. —London Express.

CAUSE, PREVENTION AND TREATMENT OF MISCARRIAGE. In a paper on this topic, in the British Medical Journal for Oct. 5, last, Dr. Peter Horrocks, divides the causes of miscarriage into fœtal and maternal.

1. Fœtal causes are syphilis, carneous mole, fatty degeneration of the placenta, inflammation of the placenta (rare), deciduoma malignum and affections of the cord, as being too long and being twisted around the child's neck, or too short and causing pluckings upon the placenta. The fœtus may die from disease itself, as in the brain, liver or kidney.

2. Maternal causes are fibroids, endometritis, displacements, especially retroflections, zynotic diseases, cancer of the cervix, excessive use of alcohol and hot sitz baths. Starvation has practically no effect upon the fœtus in uterus. Over-suckling is said to be a cause of miscarriage, but seldom acts. Deep fissures of the cervix uteri and abnormal patency of the cervical canal are also causes. From what has been stated in connection with the causes of miscarriage, the method for prevention can easily be deduced. Nothing must be done by the patient that would disturb the connection between the placenta and the uterine wall. The question of operating during pregnancy must be decided according to circumstances. Treatment of miscarriage resolves itself into the question of whether it is (a) avoidable; (b) unavoidable or incomplete. When a miscarriage has already taken place, it is best to give an anæsthetic and complete it.

Dr. Horrock says a prima para is not so liable to miscarriage as a multipara because the parts have never been lacerated. Early miscarriages, when only one period has been missed, and another is due, are generally criminal. Hard work, lifting, jumping, coughing, vomiting, straining at stools, shock and fright, extraction of teeth, are all causes, as well as those named above.

MEDICAL DIAL

A Monthly Record of Medicine and Surgery

Published by MEDICAL DIAL COMPANY

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SUBSCRIPTION PRICE

United States, Canada and Mexico, per annum, in advance, - - - - - - - - - - - - - - $1.00
Foreign Countries in the Postal Union, per annum, in advance, - - - - - - - - - - - - - 1.50

N. B. Matter for the reading pages should reach office of publication on the 20th of the preceding month and display advertising on the 25th, to insure attention.

Vol. IV MINNEAPOLIS, MINN., MARCH, 1902 No. 3

INSANITY AMONG TEACHERS.

The sixty or seventy thousand teachers at present in the United States, and the many thousand as well who have been previously so employed will not feel complimented by the recent statement of Dr. J. G. Kiernan, of Chicago, "That school teaching, above almost every other occupation, is likely to attract the mentally deficient to it." They will not be slow to challenge the truth of this expression, nor will it require a search light to reveal facts to refute such a broad insinuation. The multitude of intelligent, sound, and cultivated minds that fill the posts of educators, as well as the still greater multitudes that have preceded these in the training and mental improvement of the whole population of the country, and who have risen by superior ability and industry to all the higher positions of trust and honor in the land, condemn all such rash and libelous expressions, and stamp them as unworthy the serious consideration of rational individuals. More than nine-tenths, probably, of the men and women of our country, known as leaders of their fellows and in society, have been at some period of their lives "attracted to the work of teaching," and have shown conclusive evidence of brain capacity in large contrast to "mental deficiency."

The Dr. also remarks "that the system of competitive examinations, which determines a teacher's qualifications is the system best adapted to the admitting of those deficient candidates to the work; and that such system had long since shown itself peculiarly open to idiots and individuals incapable of caring for their persons; but who were most proficient in storing up information from text books and encyclopedias." If this were true all candidates for competitive examinations for positions as teachers, and for our civil reforms should be relegated "to go away back and sit quietly down" until those found capable, by some means not yet discovered, should be known and called to their right vocations.

The Dr. also thinks the conditions he has stated in regard to teachers accounts for the chronic insanity among them as a class. There can be no question as to the exhaustive demands on the nervous system of those engaged for prolonged periods, and often in particularly difficult situations; and those individuals of a highly organized and nervous temperament, either inherited or acquired by ill health should not be encouraged to enter upon such avocations; but under all these circumstances it is yet to be demonstrated that teachers fall victims to chronic insanity in numbers out of proportion to that of those engaged in other occupations. It has not been so considered in the writer's experience in the personal care of more than twelve thousand cases of insanity, and during a period of thirty-four years of hospital treatment for this special class of patients. The discipline of a teacher's life is one to establish self-control, and that is one of the best preventative means from morbid self-introspection and impulse—both symptoms of mental impairment.

A FAMINE IN THE MIDST OF PLENTY. One of the most serious indictments upon the intelligence of the people of Minneapolis is the fact that such cruel apathy exists regarding the water supply, which everybody knows is not only inadequate, but is unfit for culinary or drinking purposes. It is also a reflection upon the business sagacity of the otherwise astute residents of a progressive community that in order to obtain a wholesome water it must be bought from dealers. In addition to this indirect tax, it is necessary to maintain a water-works system whose mains throb with a fluid that is contaminated with sewage, while at the same time there are close at hand so many bodies of fresh, pure water containing an unmeasured quantity of a necessity easily obtained.

The fame of this region regarding its lake environment is world-wide, thousands visiting this section annually to take advantage of its inviting resorts beside the ever enchanting lakes. But, in the midst of an abundant supply of pure water, a great city like Minneapolis at the present time obtains its water from a stream that is the great sewer of a vast section teeming with life and excrement. Such is the weakness of human nature that will permit such a thing, when the problem is so easy of solution.

Tap Mille Lacs—only seventy-seven miles away—and both Minneapolis and St. Paul will have an unusable quantity of the best water in the world.

CONCERNING BARBER SHOPS. The entire public should be vitally interested in advocating cleanly barber shops and hairdressing parlors, but many of these places of business, which all classes on various occasions must of necessity patronize, are unfit to serve the public. It is a source of gratification, however, that Minneapolis has more tonsorial enterprises conducted on hygienic principles than the average city of its size the world over, though it cannot be denied that we have quite a number of places where the workmen are not careful enough in their service on their customers, and, although the state has a law providing for the examination of barbers which all must pass in order to obtain a license to practice their art, and another law prohibiting Sunday work, there is no state law or municipal ordinance to govern shops. In so far as we are informed no state in the Union has yet passed any regulating law, yet no one will deny that every state should take up this important subject and compel all barbers to maintain their shops on hygienic principles.

Other cities are patterning after the better class of shops in Minneapolis, and it is interesting to note the recent action of the New York City board of health looking to the betterment of the barber shops of that city. The board has commanded: "Don't use a sponge on the face; don't use a powder puff; don't use an alum stick; don't use a towel more than once." These orders will probably be posted in every shop. "They are good so far as they go, and make an entering wedge," says the Medical Record, "but the greatest care becomes necessary in the proper treatment of the brushes, combs, razors, towels, and the operators' hands. It has been pointed out in these pages that subjects of farus, ringworm, and other dangerously contagious diseases receive not alone the usual and ordinary ministrations of the barber, but that in some shops, especially in the down-town, crowded districts, such cases are actually treated by epilation and other measures over long periods of time. The great danger from such a practice need not be dwelt upon.

"Impetigo contagiosa is perhaps the commonest disease transferred from one person to another by way of the barber's chair. The great majority of adult males presenting this affection probably contract it in this way.

"The matter is simple enough when we consider the extreme contagiousness of the disease; its association with pediculosis capitis, especially in children who often go for a hair cut at the time the scalp begins to itch and break out. The man who is "next" gets the full effect of the germs as, with unwashed hands, the lather is rubbed into his face; for even the best of shops it is rarely one sees the barber wash his hands between customers, and though manicuring may be done on the premises, it is seldom practised by the barber on himself for the customer's good. While there is probably little danger from the blade itself, still the razor, along with all else, should be kept clean. The greatest danger from lues lies in the use of epilating forceps and tweezers in extracting ingrowing hairs, and in rubbing pimples and cuts with the alum stick, which holds upon its surface blood, pus, and germs from a predecessor.

"Another great disseminator of germs is the clipper. After use, it is usually wiped and laid away in a drawer, and considered clean, according to the barber's interpretation of the term cleanliness.

"The board has a task before it in the education of the barber, but if, as it is hoped, the public will aid as teachers, much may be accomplished. There are many educated, refined, and cleanly barbers to whom our criticisms do not apply, and these would gladly aid in instituting such general reform measures as they already carry out in their own establishments. The realization, however, would probably be slower than if urged from the outside. Still, the united cooperation of the guild would be highly desirable. They could make a rule among themselves that children with sore heads (which would include farus and ringworm) should be excluded from the shop; that subjects of active syphilis should be advised to learn to shave themselves, or that extraordinary precautions be taken in all suspected cases. They could further agree that it is detrimental to the best interests of their calling that any member should attempt to encroach upon the more learned calling of medicine by treating such scalp diseases as are caused by germs, and most likely to spread disease in their legitimate clientele.

"Another very important agreement among themselves would be that when a member of the craft is himself sick with a disease in a contagious stage or form, he should absent himself from work. The entire armamentarium should unquestionably be maintained in a safe state of cleanliness, and to this end brushes, clippers, combs, etc., should be boiled or sterilized in some other way. A method which does not injure the instruments can be carried out by placing them for four hours in a closed receptacle, in which fotry-five grains of paraform are evaporated by heat for each cubic meter of space."

THE HINDOO TWINS. The Hindoo Twins, Dordica and Radica, united as the Siamese twins were, were separated by Surgeon Doyen at Paris on the 9th of February, and appeared to be doing well, were playing with toys the week after the operation; but one, Dordica, died suddenly in convulsions on the 16th inst, the cause of death said to be the advanced stage of tuberculosis of the patient. The other, Radica, seems to be improving.

THE MEDICAL DIRECTOR OF THE LOUISIANA PURCHASE EXPOSITION. The important post of medical director of the St. Louis World's Fair has been filled by the appointment of Dr. Leonadas H. Laidley. Dr. Laidley was born at Carmichaels, Pa. He was educated with a view to the medical profession, and entered Cleveland Medical College in 1866. The following year he entered the Jefferson Medical College at Philadelphia. After graduating in 1868, he practiced medicine with his father and brother, and then went to New York, where he entered Bellevue Hospital Medical College and took a higher and more thorough course, being graduated with distinction in 1872. Coming to St. Louis the same year, he entered upon a successful career both as a practitioner and a medical teacher, showing always a decided love for the humanitarian side of his profession.

He helped organize the Young Men's Christian Association, and attended the sick applying to that institution for aid. He organized the free dispensary which became the nucleus of the Protestant Hospital Association. He filled the chair of anatomy and chemistry in Western Dental College of St. Louis, and after the organization of the St. Louis College of Physicians and Surgeons was called to the chair of surgical diseases of women. After filling that post for years he was called to the same chair in the Beaumont Hospital Medical College, and, upon its consolidation with the Marion-Sims College, forming the Marion-Sims-Beaumont College of Medicine, he was made professor of gynecology and pelvic surgery. In addition, he is surgeon to the Protestant Hospital, consulting surgeon to the Female Hospital, and a leading member of the St. Louis Medical Society and other medical organizations. He was a delegate to the British Congress in 1883; and while abroad visited the hospitals of the principal cities. When the Louisiana Purchase Exposition Company was organized he was one of the incorporators.

THE DENTIST'S FAMILIARITY.

"His hand lay on her hair,
Her face so fair upturned to his
Bespoke the truth;
While he, with subtle care
Her thoughts did share;
A shriek, a whiz—
He had the tooth."

The Problem of a Safe and Adequate Water-Supply for the Twin-Cities.

By Leo M. Crafts, B. L., M. D.

Dean and Professor of Nervous Diseases in the Medical Department of Hamline University.

While a question of purely local bearing may not usually be of sufficient general interest to claim the attention of the general reader, yet the problem of a suitable water supply for a metropolitan area of over 120 square miles, and 400,000 population, in the cities of Minneapolis and St. Paul combined, is of sufficient moment, both from a sanitary and economic standpoint, as pure water for domestic consumption is a matter of vital importance to every community. At least 100,000 deaths annually in this country are attributable to contaminated water. And a recent article in the Sanitarian well says that impure water is the chief vehicle through which the germs of disease and death enter the body.

The supply of St. Paul is comparatively pure at present, but is inadequate and will early necessitate material increase from some other source. The problem confronting Minneapolis is both immediate and urgent, as a little study of the prevailing conditions will indicate.

Water is distributed to the city mains from three pumping stations, one at Camden Place on the north, where the river enters the city, and two in the heart of the city at the falls, one on the west side and the other on Hennepin Island. The greater part of the water comes from the Camden Place station, but a considerable portion is pumped into the mains for domestic use from the lower stations. Above the sites of these stations four city sewers enter on the west bank. These are intended only to discharge overflow from storms, which gives one of the worst elements of contamination, flushing the decomposing street filth into the river. About thirty-five private sewers empty from Nicollet Island a short distance above the intake pipes of the lower stations. About six private sewers empty on the west side and about fifteen discharge into Bassett's creek, a sluggish, foul stream that meanders through a thickly populated, unsanitary part of the city, and empties its disease laden current into the river.

The amount of sewage and surface washing is increasing steadily, the volume of water in the river is diminishing rapidly, and when it reaches the lower stations is now little more than a turbid and murky flow of liquid sewage, bearing, in addition to the discharge from the city, the drainage from a score of cities and towns above and also from unnumbered farm buildings and barn yards.

The dangerous condition of the present supply is indicated by a report by Dr. J. F. Corbett, bacteriologist for the city health department, on Sept. 27th, 1901. According to his findings, 1 c.c. of water at station No. 1, contained 1,140 dangerous or suspicious bacteria; 1 c.c. from station No. 3 (Camden Place), 215 dangerous or suspicious bacteria; and 1 c.c. from station No. 4 (the site of the new plant now under construction on the east side above Camden Place), contained 304 dangerous or suspicious bacteria.

No recent examination has been made at station No. 2, on Hennepin Island, but the last one showed 8,640 bacilli of all descriptions. These figures show that, even at the best, when taken from Camden Place the water supplied to this city is dangerous and unfit for any domestic use. The construction of the new station and the proposition to install an additional pump at Camden Place, at a very large outlay at the expense of the city, can give only partial and temporary relief. An additional pump at Camden is a desirable thing to remove all necessity of taking water at the lower stations, until a proper supply can be provided, but the construction of the new station now under way is worse than a waste of funds. To overcome the increasing evil the plans of the water department, meditate the installation of a great system of sedimentation and filtration at immense cost, and continued outlay for operation.

The cost of operating the entire pumping system the past year was $62,653.08, but with the new station in operation this will probably be increased to $100,000.00, on a conservative estimate. The plans now under way and meditated can only be temporary at the best, for it remains yet to be proven that a badly contaminated water can be rendered safe for domestic consumption, as fully illustrated in the difficulties of the city of St. Louis in its efforts to make a wholesome water from the same stream with which we have to deal under present arrangements.

Minnesota is favored with a larger surface area of pure lakes than any other state, and the preservation of an ideal supply would appear to have been provided for the Twin Cities in Mille Lac, seventy-seven miles north of the reservoirs at Columbia Heights, remote from all railways, a watershed covered with virgin forest, practically entirely unsettled, and to be easily placed under sanitary control. Having long regarded this as the logical solution of the problem, the writer recently visited the lake for personal study of the conditions. The watershed is narrow, not exceeding six miles at any point. The lake has an area of over 200 square miles. The shore line is mostly either sand beach or edged with boulders and has comparatively little marsh. The water is clear, pure, and cold. Conservative estimates indicate a minimum flow of 50,000,000 gallons per day. A steel main can be constructed directly to the reservoirs at Columbia Heights for about $3,500,000, as estimated by J. T. Fanning, the well known consulting engineer. This would do away entirely with the necessity of constructing great pumping stationes, sedimentation basins and filtration beds, and the continual heavy outlay for maintenance and repairs, as the gravity system would be used, the lake lying about 450 feet above the city and over two hundred feet above the level of the reservoirs which can be used admirably for storage and distribution to the mains of the two cities. The cost divided between them would not be too great, and if the present proposed outlay could be stopped and applied in this direction would cover a large part of it and in the end be an actual saving in direct expense, leaving out of account the inestimable value of lives lost annually, about 200 deaths being fairly attributable to impure water supply. The heavy personal expense caused by illness in the hundreds of cases not fatal, the conditions of more or less permanent invalidism not infrequently resulting, and the heavy indirect tax now being paid by a great part of the population for spring waters and private artesian wells.

The Twin Cities should combine and move at once for legislation to create a commission, probably along similar lines to those adopted in Massachusetts in providing a suitable supply for the city of Boston and surrounding towns, and which has done its work most admirably. Such a commission should be vested with authority to investigate and determine a suitable and ample water supply for Minneapolis, St. Paul and possibly neighboring towns. And, if Mille Lacs should prove feasible, the sanitary control of the shores of the lake and of its entire watershed should be provided for and acquired. The supply from this lake, from estimates, would be ample for the present, as the daily consumption of the two cities does not exceed 40,000,000 gallons. Later as needed, the outflow of neighboring lakes and streams could be turned into the lake, and when required, a main run directly from Mille Lac to Leech Lake would give an ample, permanent supply, as nearly pure and perfect as a great system of water supply can ever be.

Treatment of a Case of Pertussis With Cerebral Engorgement.

By J. F. Rinehart, M. D.

Former Member Kentucky State Medical Society; Member Alamanda County Medical Association, Oakland, Cal.

Case.—G. P., aged 5½ years, had been going through an ordinary attack of pertussis for about four weeks when I was called in to see him on account of an intercurrent attack of bronchitis. When I first saw him he had a temperature of 104°, a pulse 120, a respiration of 40, with coarse and fine moist rales over each lung. In addition to this his cough had become very much more severe with the development of the bronchitis, so that the paroxysms would last over a minute, suffocation appearing to be imminent with each spasm of cough.

On account of these prolonged spasmodic attacks there had developed a set of symptoms referable to the brain itself, viz., drowsiness, inability to fix attention upon a subject when aroused, irregular muscular twitchings and sharp neuralgic pains, affecting at first one part of the body and then another.

The real condition of the brain in this case was what I have often noticed in pertussis, where the spasmodic attacks are unusually frequent and unduly prolonged, and also in cases of infantile convulsions which have been often repeated, or in which the seizure has lasted beyond 3 or 4 minutes, viz., one of swelling or beginning edema. It is much the same condition as would be found in the hand if the wrist should be tightly bound with a cord for a sufficient length of time to cause the hand to swell. There would be at first a very intense venous engorgement, and then an extravasation of serum into the connective tissue, causing true edema.

The symptoms above mentioned occur where there is a simple swelling of the brain from venomous engorgement; later on, when a true edema has occurred, there appear convulsive movements and tonic contractions of certain sets of muscles, with paralysis of certain other sets, according to the location of the edematous area, and later still such symptoms as occur from general brain pressure, viz., coma, general paralysis and death.

The treatment of such a case as this presents some difficulties. To allow the severe paroxysms of cough to continue would be to allow the brain to become edematous; to check the cough entirely would not be without danger of allowing the bronchitis to spread to the smallest tubes, causing the dangerous condition of capillary bronchitis.

My experience with these cases has taught me that in such a condition as has just been described there is much greater danger from the brain than from the lungs, and that our most energetic measures should be directed to the relief of those symptoms referable to the former, relying more upon local applications and derivative measures for the relief of those of the latter.

The patient was accordingly given a mixture, of which I shall speak a little later, for the control of the cough; was also given small doses of calomel, repeated often until active purgation ensued, and was clad in a cotton jacket covered with oil-silk, having had turpentine and lard applied freely to the chest first as a counter-irritant.

To try to relieve a swollen brain, such as I have described above, with remedies directed to the relief of cerebral congestion, such as ergot and the bromides, would be entirely useless. There is but one rational method of procedure, and that is, first, to remove the cause, i. e., the prolonged forcing of blood into the brain caused by the cough; and second, to use derivatives to cause the absorption of whatever serum may have been already forced through the vessel walls and into the brain substance.

The first is accomplished best by the following prescription: In giving this I am aware of the great number of remedies recommended for the control of the spasmodic stage of pertussis. I have tried most of them, and have found the following prescription to be of the greatest service in the greatest number of cases:

℞	Tr. stramonii sem........	2 drams
	Ammonii bromidi.........	2 drams
	Elixir simplicis, q.s.ad....	2 ounces

M.—S.—Teaspoonful in a little water every two or four hours as may be needed to quiet the cough. This is the strength ordinarily required for a child of five years.

On the morning following, the cough was controlled, and the cerebral symptoms, as a consequence, were greatly relieved.

The treatment after this consisted in the administration of the above mixture often enough to keep the cough within bounds, and of $2\frac{1}{2}$-grain doses of carbonate of ammonia every three or four hours as an expectorant, together with milk and whisky at short intervals. The recovery of the patient was prompt.—Pediatrics.

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*Angina Pectoris.

By Marvin E. Nuckols, M. D., Richmond, Va.

Lecturer on Operative Surgery, University College of Medicine.

In reviewing all accessible literature on the subject, I find that there is a diversity of opinion as to the exact nature of the condition, some contending that it is but a symptom of some more or less grave vascular lesion, while others claim that it is a disease in itself, always having a definite group of symptoms. No less an authority than William Osler states that it is nothing more than a symptom. Clifford Allbut, a distinguished English physician, holds the exact opposite. When we find such authorities as the above holding opinions so entirely different, we should not wonder that the lesser lights have vague and indefinite ideas regarding angina pectoris.

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*Read before the Richmond Academy of Medicine and Surgery, November 26, 1901.

In discussing this condition I shall of necessity have to deal with a great deal that is now well known to you all; however, in doing so I shall endeavor to present it in such a way as to arouse some interest, and thus provoke a full discussion of the subject. I wish to be understood in the beginning as not believing in pseudo-angina pectoris, but believe that angina pectoris is angina pectoris, and that the only difference in the cases seen is one of degree; therefore I eliminate such conditions as the agitations of neurotic women, generally due to hysteria, indigestion, or intercostal neuralgia, and also certain spasms of tobacco poisoning, which differs widely and fundamentally from angina pectoris.

Having, then, eliminated these, we will take up angina pectoris proper, and we shall find that it is characterized by a very definite group of symptoms. Pain is usually the most prominent, but it is the character of the pain which is of so much value. It cannot be likened to any other pain, being sharp and stabbing, located behind the sternum (not in the heart), radiating upward toward the left shoulder, neck and head, and down the left arm into the fingers, and sometimes into the testicles, which may swell. As I have mentioned, there is no pain in the heart, but there is a feeling of depression or of something lacking in this region. The peculiarity of this pain is that it is accompanied by a feeling of constriction about the chest and neck, likened to the pressure of a vise. Baltour describes it as a feeling as if a mailed hand grasped the chest and squirted through its fingers flashes of agony. This is often accompanied by convulsive movements of the muscles of the whole body, but particularly of the chest, neck and arm.

The expression is extremely anxious, manifesting an indescribable fear of impending dissolution. The attitude is one of terror-stricken stillness. The body is covered with beads of sweat, and the extremities are cold and clammy Strange to say, the pulse is, as a rule, unchanged. We have no dyspnea like that so often seen in heart disease, though respiration may be increased in frequency, and during severe paroxysms, temporarily suppressed. Pain is sometimes entirely absent, or may begin in the hand and extend upward. In these cases the retrosternal pain is not severe.

The indescribable fear of impending death is never absent. The preceding are the usual symptoms of an ordinary attack, which may last only a few seconds or a few minutes, to be followed by others with increasing frequency.

The attacks are brought on by some unusual or violent exercise, though they may come on while in bed during the night, without any apparent cause. As to the actual cause of angina, very little is definitely known. It is certainly not always due to heart disease, as is abundantly proven at both the bedside and at post mortems. A fatal case is reported by T. E. Bullard, which he saw in one hundred and five paroxysms of true angina during the last of which the patient died. There were no evidences during life or after death of any organic change. Whatever constitutes angina pectoris, this fact is very evident—that a heart organically diseased will fail under repeated attacks of angina, whereas one with no evidence of disease may partially or completely recover.

It is argued by some that a vasomotor spasm is the immediate cause of angina, bringing on an increased arterial tension and throwing extra work upon the heart. In support of this theory, they lay great stress upon the good results derived from the administration of nitrites, but we must remember that the nitrites relax the heart as well as the arterioles, and that they possess certain anodyne and antispasmodic properties.

The majority of cases of angina show but little, if any, increase in tension. If angina is due to increase in tension, why don't we always have it in all forms of heart disease accompanied by increase of tension? Is it not possible for pain to cause the increase in tension if there be any? We have abundant evidence that pain can cause increase in tension. As examples of this I might mention kidney colic, cramp in the abdomen, etc.

A theory held by many is that it is a cramp of the heart muscle. Osler states that we may have a localized cramp, or a cramp of some of the musclar fibres of the heart. This theory to me seems altogether untenable, for I cannot conceive of a muscle or some fibres of a muscle undergoing cramp and still being able to act. It seems to me the power of the muscle is temporarily lost. The quality of the heart muscle to undergo rhythmic contractions is too deeply implanted in its nature to give place to any change, save to either stop completely and permanently, or to prolong diastole. No drug or electrical stimulus can do more than increase force of systole or prolong diastole.

A third theory is that it is nervous in origin. This, to my mind, seems to explain some cases, particularly those with pain beginning in the hand and extending upward, resembling the aura of epilepsy.

A theory accepted by many is that it is a neuritis of the cardiac plexus. In this case, pain should always be present, for it is hard to conceive of a neuritis without continuous pain.

A theory that will explain a great many cases is that the cause lies either in an acute or chronic aortis near the root of the aorta, and as the cardiac plexus of nerves lies in close relation a neuralgia may be set up secondarily in this plexus. However, let the cause be what it may, we know that the condition is always characterized, with very little variation, by a definite group of symptoms, and that we do not always find manifest organic lesion either of the heart or blood vessels.

It is supposed that the pain is a referred pain, and that it is due in many cases to increased pressure on an inflamed aorta, manifested through the cardiac plexus. One proof of this is seen in mitral regurgitation; if angina has been present relief is afforded when the compensation fails.

As to how angina kills, there is a difference of opinion. Some say that it is a reflex from inhibition of the vagus. This inhibition is brought about by the violent pain, the weak and degenerated heart and blood vessels being unable to survive the shock.

The treatment may be divided into two parts: (1) During the attack. (2) During the interval. During the attack, inhalations of amylnitrite. If these fail, use chloroform or ether by inhalation, and, as a last resort, give morphia and atropia hypodermically. Use hot applications over the region of the heart.

During the intervals. (a) Hygienic and dietetic. Complete change in habits must be advised. Attention should be given to the bowels, to see that they act regularly. Avoid excesses of all kinds, particularly of eating and drinking. The diet should be regulated so that no digestive disturbances shall arise. Instructions should be given to avoid excitement and violent exercise.

(b) Medicinal. Nitroglycerin should be given in full and increasing doses. If degeneration of the arteries or any tendency toward rheumatism be evident iodides should be given in full doses, extending over long periods, but always with an eye to the condition of the stomach.—Va. Med. S.—M.

The Injection Treatment of Hemorrhoids.

By Henry M. Woolman, M. D., Newark, N. J.

Hemorrhoids being by far the most common among rectal diseases, and one which the physician in private practice is called upon to treat oftener, is also the greatest bone of contention relative to the best manner of effecting a radical cure.

It is an indisputable fact that, until within the past few years, an operation for the radical cure of hemorrhoids was considered so formidable an undertaking that their treatment, aside from palliative measures, was almost entirely neglected by the general practitioner. There has been considerable dispute as to whom the honor belongs for the discovery of the injection treatment. Dr. Mitchell, of Illinois, claims it. Dr. Colles, of Dublin, has been accorded the honor of first treating piles by injection in 1874. Dr. Sturgeon claims that he recorded cures in the Medical Brief in 1874. But there was little attention given the subject until Dr. Agnew reported his cures in 1877.

The fact is that the treatment of hemorrhoids by carbolic acid injection has not been placed before the profession upon a practical and scientific basis, nor has it been fairly presented, but has always, until the past few years, been looked upon as quack treatment.

This, with the diversity of opinion concerning the different combinations and strengths of acid to be used, together with reported accidents in some instances, and the strong objections raised by Drs. Allingham, Matthews and Kelsey, as well as many others, has done much to retard the method of treatment, as well as to mislead an unsuspecting and confiding profession.

Dr. E. F. Hoyt, of New York, says: "There is not a hemorrhoidal case possible which cannot be obliterated by this means," and I am at a loss to explain why so many cling to methods that entail so much havoc and suffering.

If every college would have this subject demonstrated by men of experience, all other methods would soon lose recognition. I cannot but repeat the words I published in an article in the Medical World for March, to the effect that the treatment of hemorrhoids by injection marks an epoch in the history of medicine unrivalled by any other advance in the treatment of any other disease.

Many object to this method for fear that it may cause sudden death, carbolic acid poisoning, emboli, abscess, fistulæ, etc. I have never been able to learn of a death as a result of this treatment, and people who make this claim have never been able to verify it except by hearsay evidence. Abscess and the like are no more apt to occur after injection than following ligature, or clamp and cautery.

In a work published by Drs. Goodsall and Mills of St. Mark's Hospital (on page 276), the following language is used: "In the third stage of hemorrhoidal formation, that is when the piles do not spontaneously return into the rectum, but require manual reduction, the prolapse again taking place on slight exertion, such as standing or walking, as well as with every act of defecation, bleeding is the exception, a discharge of rectal mucus taking its place. When the surfaces of these piles are examined the mucus membrane will be found to have undergone considerable structural change, at its lower part the epithelial covering being considerably thickened, so as to closely resemble epidermis. The altered mucus membrane is very much paler in color than the normal, and when dried its surface does not readily become moist again. Moreover gently rubbing the surface will not always cause bleeding, as would happen in the case of a pile covered with normal mucus membrane. Microscopically the epithelum of the altered mucus membrane is seen to have become metamorphosed, the single layer of columnar cells having been changed into several layers of stratified epithelium."

In my opinion this describes exactly the form of a tumor to which I believe the injection method is adapted, although I have used it in every form without a single failure.

It is hardly worth while, in a paper of this kind, to go into the etiology and diagnosis, as I hope all physicians understand it.

In the treatment by the injection method there are certain rules and details which, if followed, will greatly increase the success, but the neglect of which will invite failure. Never inject piles that are inflamed or irritated; never use a speculum, as all piles of any size are within the first inch and a half of the rectum. Inject the smaller piles first. Handle the parts with extreme gentleness. Apply vaseline to protect the parts from the overflow of fluid. If injecting large piles, constipate the bowels for three days with opium. Do not operate the second time until all soreness disappears.

It matters not what form of tumor is presented for treatment, as they are all amenable, the capillary as well as the others.

Insert the needle at the most accessible point, preferably near the apex, or about one-third the distance from the apex to the base. Inject the solution slowly, drop by drop, and watch the effect, which will be noted by the change of color. Take up all excess with glycerine or Monsel's solution placed on cotton and held over the opening. If, upon the withdrawal of the needle, blood follows, there has not been enough of the solution used, thereupon reinsert the needle and inject more. I have often used as much as a dram at a single injection. If there is any pain following the operation, a liberal use of hot water will relieve it.

I have been asked many times if sloughing did not follow the injection. I have never seen such a condition, and cannot conceive of it except as due to a low state of vitality, or where a few drops of a very weak solution are used.

Marginal swelling and abscess have never occurred except where patients disobeyed instructions.

A relapse of hemorrhoids after treatment is one of the points advanced by those opposed to the injection method. It is useless to reply to such a charge only as it applies to the treatment. The weaker solutions cause maximum inflammation and minimum cure.

That brings us to the solutions, and there are so many that it is impossible to quote them all.

Andrews is my authority for the secret system of Brinkerhoff, as follows:

℞	Acid carbolic	℥ i.
	Zinci chloridi	gr. viii.
	Olive oil	℥ v.

Mix.

The Rorick system, also from Andrews, is:

℞	Acid. carbolic	ʒ ii.
	Glycerine	ʒ ii.
	Ext. ergot fl	ʒ i.
	Aquæ	ʒ ii.

Mix.

Gant, in his rectal surgery, gives the following:

℞	Acid. carbolic	gr. xii.
	Glycerine	ʒ i.
	Aquæ	ʒ i.

Mix.

Dr. Hoyt's mixture has been used by many with good success. It follows:

℞ Acid carbolic ....m lxxx.
Ext. hamamelis (Pond's).....
Aquæ dist............aa. ʒ vi.

Mix.

Dr. Mason, of Omaha, uses a 50 per cent. solution of carbolic acid, glycerine and water.—Medical Council.

54 Thirteenth Ave.

Non-Surgical Treatment of Appendicitis.

By John C. Murphy, M. D., St. Louis, Mo.

President Tri-State Medical Society of Iowa, Illinois and Missouri; Consulting Gynecologist to the Woman's Hospital of the State of Missouri.

I am well aware that the consensus of opinion, among surgeons, is that appendicitis is essentially a surgical disease, and that the general practitioner is trespassing on forbidden ground when he attempts to treat it otherwise. I am also cognizant of the fact that every patient we see with a pain in the right side of the abdomen is not suffering from appendicitis. But any one who has had even a limited experience ought to have learned to differentiate. The sudden onset of abdominal pain, tenderness over the appendix, the tense, hard feeling of the overlying muscles, gastric disturbance and rise of temperature ,serve to make diagnosis of appendicular inflammation reasonably easy. If pus be present and there be even a slight leakage into the abdominal cavity we may, of course, have a different clinical picture. There may be even a subnormal temperature, an abnormally slow pulse, a leaky skin, and other evidence of general infection. It is in this, and the gangrenous form, that the pelvic surgeon plays the most important role. But pus or gangrene are not ever-present factors in appendicitis, as I have frequently observed in the operating room. I have seen many appendices removed that showed only a slight catarrhal inflammation, and under proper medical treatment recovery would have taken place without subjecting the patient to the dangers of an abdominal section.

I do not claim that the treatment I follow is a panacea for all cases of appendicular inflammation. Neither do I wish to dim the glory of the abdominal surgeon, as we all know that he has been one of the greatest life-saving products of modern times. I do not even claim any originality in the matter of treatment, but am content to shine in the reflected light of a star of greater magnitude; and right here I wish to give public expression to my high appreciation of Dr. A. J. Ochsner, of Chicago, as it is owing to his valued paper on this subject that I have been enabled to save a number of lives, some of which might have been sacrificed on the altar of surgery. The plan of treatment as advocated by Dr. Ochsner and followed by myself is as follows: As soon as the diagnosis of appendicitis is made all food by the stomach is absolutely withheld. This means exactly what it says: Absolutely all food! It does not mean a little milk, a little broth—not even a little water—if it increases nausea or produces the least additional disturbances. No purgative is given unless it be an initial dose of castor oil.

What is the philosophy of this treatment? What is the object to be attained? It is absolute, physiologic rest to the inflamed organ as nearly as we are able to secure it. We all know that absolute rest is one of the most important factors in the treatment of inflammation in other parts of the body. We also know that rest has a marked influence in controlling pain. We put a sprained ankle in a plaster cast or adhesive strip dressing, or immobilize an inflamed joint. Why do we do it? Simply to put it at rest and give Nature a chance to repair the damage done. Why not the same reasoning hold good elsewhere—in the abdominal cavity, for instance? I have treated peritonitis and appendicitis by the use of purgatives, as has been advised by so many; but thanks to the excellent paper of Dr. Ochsner, additional light has been shed on this very important subject and we are now able to approach it in a more scientific manner. Food taken into the stomach in the smallest quantity excites peristalsis and in the presence of localized inflammation may defeat the efforts of Nature to protect the general cavity by breaking up adhesions and permitting infectious material to be widely distributed over the entire peritoneum. Any man who has had experience in abdominal work knows what a kindly feeling Nature has for the surgeon, and how she tries to simplify his work by limiting the destruction of disease to the smallest possible area. It is too bad if we so little appreciate her efforts that we try to immediately destroy them with purgatives and other like weapons. This picture may seem overdrawn, but so strongly impressed am I with the importance of the matter that I cannot help but give strong expression to what I believe to be true. Even when pus or gangrene is present, and surgery becomes imperative, if this plan of treatment has been adopted in the beginning we find, upon opening the abdomen, that we have to deal with a simple, circumscribed abscess instead of (possibly) a general septic peritonitis. So, from a surgical as well as medical standpoint, the treatment should take precedence over all others. The withholding of food does not mean the starvation of the patient, but in my own cases I seldom give anything, even by the rectum for the first thirty-six hours, but after that the patient can be well sustained with nutrient enemata of some suitable and non-irritating substance—with which all are familiar.

I will cite a few recent cases by way of illustration from a clinical standpoint:

Case I.—William M., aged 28 years, was taken at night with acute abdominal pain and vomiting. I was sent for but being absent from the city I did not see him until twenty-four hours later. In the meantime he had been given Epsom salt, much of which he was unable to retain. His temperature was 102 degrees, pulse 120, abdomen much distended, pain and tenderness over appendix, vomiting, etc. I stopped all food by the mouth, discontinued the salts (which he had been ordered to take in small, repeated doses). In twenty-four hours his temperature had dropped to 100 degrees, pulse 96, pain practically abated, and only slight gastric disturbance. On the third day temperature and pulse were normal. The bowels moved naturally on the fourth day. Rectal feeding was continued for ten days, when it was thought safe to give liquids by the mouth. Patient made a rapid recovery.

I saw this patient recently and find him in normal condition, no tenderness or induration over appendix.

Case II.—L. L., aged 26, was taken with symptoms much the same as Case I; was treated by a homeopathic physician, who correctly diagnosed his condition and advised immediate operation—which was declined. I was called and at once instituted the same line of treatment as in Case I. Symptoms became modified in a short time, and after ten days in bed he was able to be up and shortly resumed his occupation as a carpenter. He has had no return of the disease; and no bad symptoms of any kind.

Case III.—Mr. E. H., aged 50 years. I saw this gentleman on the morning of November 6, finding him suffering great pain in abdomen, vomiting constantly, temperature 103 degrees, pulse 120. He presented every evidence of an appendicular inflammation. He had been sick twenty-four hours and had taken calomel, which did not relieve his distress. The man's condition was so alarming, his pain so severe and being of very nervous temperament, I reluctantly gave him one grain of phosphate codeine hypodermically. Vomiting was such a marked and distressing symptom in this case that I was tempted to resort to lavage of the stomach, but by the use of carbolic acid in one-grain doses in peppermint water repeated every half hour or hour, I was enabled to control it very well. In other respects treatment was the same as in the other cases with the same prompt amelioration of symptoms and ultimate recovery.

This patient would have been a very bad subject for operation as he had but recently recovered from a severe illness, was of very nervous temperament, and I felt that he would surely die if operated upon—from shock if nothing else. I am happy to say that today he is practically well. While his appendix may give him trouble at some future time, it may be when he is better able to withstand an operation than at present.

I have not said anything in this paper about minor items of treatment, such as hot or cold compresses over the abdomen, nor of the use of opiates. The last named I seldom use, as I find in the majority of instances it is unnecessary, as the withholding of food accomplishes all that opium would, even to the relief of pain. Besides opium in any form is liable to prove a gastric irritant and accentuate one of the very conditions we are most anxious to overcome. If we must give an opiate, phosphate of codeine is probably the best, as it nauseates less and does not lock up the natural secretions as much as morphine.

I will not weary you with a further recital of cases, as those mentioned will suffice to show that the treatment of this condition is still within the domain of the general practitioner; and the surgeon, while a valuable ally and a good support to lean upon, is not going to get all the credit and glory for successfully treating the "new fangled," high-class product of the nineteenth century with the high-sounding name of "appendicitis."

Now let me repeat in closing, that when we support the presence of pus, or grangrene, our duty becomes clear: It is to give our patient the benefit of surgery. But we must also bear in mind that by far the greatest number of attacks of appendicitis are of the catarrhal variety, and that pus and gangrene are the exception and not the rule.—Reg. Med. Visitor.

*Transplantation of Ureter for Cure of Uretero-Vaginal Fistula.

By A. Lapthorn Smith, M. D., M. R. C. S., Montreal, Quebec.

Mrs. J. B., of Vancouver, B. C., age 34, was confined with forceps at 32; during delivery ureter was torn in two, and uretero-vaginal fistula formed. Two plastic vaginal operations made at St. Bartholomew's Hospital, London, failed to cure. On attempting to examine her vagina it was found impossible to do so without an anæsthetic, owing to the extreme sensitiveness of both vulva and vagina, both of which were covered with excoriations and ulcers. Steps were at once taken to render the urine less irritating, and as soon as a bed was vacant she was admitted to the Western General Hospital.

Another vaginal operation was performed, but in spite of the greatest care in dissecting out the fistulous tract, careful suturing and skillful nursing, the tissues were so friable that everything pulled apart and the flow of urine into the vagina was worse than ever.

On the 17th of August, 1901, assisted by Dr. England and Dr. Gillespie, I made the following operation: The abdomen was incised in the middle line from the pubes to the umbilicus down to but not through the peritoneum. The latter was then easily pushed off the abdominal wall on the right side, and not only the bladder but the large vessels of the pelvis were exposed to view, my intention being to find the ureter and cut it off close to the fistula, and to transplant it into the bladder higher up, without opening the peritoneal cavity at all. Although I nearly succeeded in doing so, and would have no difficulty in doing so should I ever have a similar case, yet on this occasion several circumstances threw me off the track, and I was eventually obliged to follow the same plan as I had seen Saenger follow in a similar case in Leipsic when I was there three years ago, namely, to open the peritoneum running over the large vessels at the brim of the pelvis and to feel for the artery, see the vein and pick up the third tube, which was the ureter. One of the circumstances referred to was the vomiting which started violently the moment the anæsthetizer ceased to "pour on" the anæsthetic (and this he stopped doing because she was so weak); and another was the unusual distention of the stomach and colon with gas, although the bowels had been well moved and the small intestines were collapsed; a third circumstance was retroversion of the uterus, owing to which I found two round tubes dipping down into the pelvis—one being later found to be the ovarian vein, and the other the round ligament. I mention these little difficulties so as to help any of my readers who may have to perform the operation. Had it not been for the vomiting and the distension of the large bowel, the intestines would have been easily pushed into the upper abdomen, as the patient was in the highest Trendelenburg posture, without which, indeed, the operation for me would have been well nigh impossible. Another cause of the difficulty in finding the ureter was in not first passing the probe into it from the vagina before the operation, for when I asked one of my assistants to do this during the operation he was unable to find it. When at last I was reluctantly compelled to open the peritoneal cavity I had only to make a little slit in the peritoneum lining the wall of the pelvis, in the line of where I knew the ureter

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*Abstract of paper read before the meeting of the Canada Medidal Association, 1901.

should be, when I quickly came upon it and picked it up.

About one inch of the lower end of it was imbedded in cicatrical tissue, and of course this much of it had to be sacrificed; a silk ligature was passed around it, while my assistant pulled it taut and tightly tied it and cut it off. The ureter was then severed a little above the ligature and covered with a gauze sponge, as urine at once came from it. As most of the deaths or failures to unite have been due to the septic condition of the urine, I had taken the precaution to administer urotropine for a week before, so that I was not afraid of a drop or two escaping. And as stricture of the ureter is another cause of failure, I did not wish to bruise it with a forceps. We all thought it much thicker than we had ever seen it before; perhaps the obstruction at the site of the injury had caused it to hypertrophy, as it is a muscular tube capable of peristalsis.

The end of the ureter was split open to a distance of a third of an inch so as to avoid subsequent strictures after it was transplanted, an accident which has marred the success of more than one case where this was not done.

A slit was then made obliquely into the right upper corner of the bladder, and the ureter stitched into it, the mucous membrane of the ureter to the mucous membrane of the bladder, with very fine chromicised catgut, and the fibrous coat of the ureter to the muscular wall of the bladder with six fine silk stitches. In doing this Van Hook's method was employed.

The bladder was then distended with a pint of weak methyl blue solution, and to my delight not a drop leaked through the point of transplantation. The two-inch cut in the peritoneum was closed with fine catgut, as was also the opening in the parietal peritoneum. In case that the transplanted ureter should fail to adhere, a drainage tube was passed down from the end of the incision in the abdomen to a little below the opening in the bladder, and a piece of iodoform gauze down to the lowest point between the peritoneum and the pelvic fascia. The abdomen was closed with silk worm gut and the patient went off the table in fair condition. Apart from the vomiting, which lasted three days, she has made an excellent recovery.—Am. Jour. Surg. and Gyn.

*Some Thoughts on the Indications for Forceps Delivery.

By R. E. Skeel, M. D., Cleveland.

Professor of Obstetrics in the Cleveland College of Physicians and Surgeons.

My excuse for bringing up a trite and well-worn subject is a belief that in the existing desire to find and exploit something new, old and common medical subjects are apt to be neglected. The good which has been accomplished by the obstetric forceps since its introduction is well understood by every one. Thousands of children have been saved by its timely application, and numberless mothers have been relieved of suffering which they have felt to be intolerable, to say nothing of the deaths and disasters from exhaustion, rupture of the uterus, and fistulæ into surrounding organs which have been prevented. A fairly extensive experience both with my own cases and in consultation practice has convinced me, however, that the instrument is not an unmixed good, and that

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*Read before the Cleveland Medical Society, November 8, 1901.

far too often damage is done which is out of proportion to the benefit derived. Without attempting to enter into all the indications and contraindications for the forceps, but confining myself to those cases in which there is no serious obstacle to delivery by the natural passages, and ruling out conditions in which great haste may be necessary, such as some cases of eclampsia, three clinical classifications can be made of the indications for forceps delivery. The first of these comprises the classic ones, namely, exhaustion of the uterus, as indicated by tetanic contraction; exhaustion of the mother, as indicated by rapid pulse and rising temperature; and exhaustion of the child, as indicated by extreme changes in the fetal heart. About these there can be absolutely no discussion as to the wisdom of terminating labor. The second class comprises indications not classic, but concerning which there can be hardly any difference of opinion, namely, caput succedaneum very large with practical cessation of progress, and absolute cessation of progress with the vagina becoming dry and swollen. The third class includes the questionable indications and of these I wish to discuss only two, namely, 1st—Is it justifiable to apply the forceps to relieve pain? 2nd—Is it justifiable to apply the forceps to save time?

It is axiomatic that the practice of medicine is designed to save life and relieve suffering, and with the object in view of saving life we operate when the operation is less dangerous than the condition for which it is performed. To relieve suffering we frequently apply measures which have some inherent danger, as the use of morphin and chloroform, operations upon lacerated cervices and perinei, operations for hemorrhoids, and even laparotomy and suspension of the uterus for a condition which in itself never endangers life. Reasoning then from other medical practice, which is considered sound, we are justified in using forceps for the relief of prolonged suffering when the conditions are such that operation presents a minimum of danger without bad after-effects. There are dangers to both patients inherent in forceps delivery, under some circumstances marked, under others very slight, and these are due 1st to the anesthic, 2nd to laceration of the soft parts 3rd to sepsis and 4th to rapid compression of the fetal head over a small area.

The gravity of the danger from any of these sources is directly dependent upon the condition of the cervix, the location of the head in the pelvis, and the tightness of adaptation of the head to the pelvic structures both hard and soft. Anesthesia is unnecessary with the head upon the pelvic floor if the latter structure is not resistant and the head is small; but the higher the head, particularly if it is still within the cervix, and the tighter the adaptation the more certainly does it become necessary to use an anesthetic, both to secure a sufficient time for dilation of the soft parts and to keep the patient from any sudden movement which might do great damage. The danger arising from the use of chloroform and ether to the surgical degree are small but they are not annulled by the pregnant state. The secondary danger from postpartum hemorrhage after complete anethesia is a distinct one and that danger becomes acute if chloral has been given freely during the early part of labor. Laceration of the soft parts is a real danger with the forceps and is brought about in three ways, by more rapid delivery than nature intended, by the added thickness and bulk of the instrument and by the tips cutting directly into the tissues. Removal of the forceps before the head emerges saves many skin-tears but does not save the pelvic floor or vagina, both of which structures frequently give way before the skin shows any evidence of injury. The danger of deep laceration is not great if operation is undertaken deliberately under complete anesthesia, and sufficient time is taken. Sepsis can be avoided in the same manner, that is by deliberation, but the risks of a certain, perhaps mild, but sometimes severe infection, are distinct if sterilization of the hands, instruments and vulva is hasty and the application is hurriedly made. The difficulty encountered in complying with the above dicta with regard to sterilization in ordinary obstetric practice is patent to any intelligent individual who has ever engaged in a general medical and surgical practice among all classes of people.

Injuries to the child are uncommon in the low, much more common in medium, and distinctly dangerous and disfiguring in high forceps deliveries. Minor injuries to the child are cuts, bruises, and damage to the facial nerve, none of which are serious matters, but very severe injuries are often produced by the rapid extraction of a large head situated high in the pelvis. Such a head must undergo a considerable degree of molding before delivery can be accomplished, and the rapid application of pressure, not only over the whole head but to a more intense degree over an area restricted to the size of the forceps blades, frequently results in the death of a child, when the slow, gradual, and uniform pressure of the pelvis would have done no damage to the fetal brain. The second indication to save time, is one distinctly unworthy of the profession, but not all the blame is to be attached to the attendant; constant nagging by impatient relatives will sometimes drive the coolest man to an unwarranted interference.

Obstetric remuneration is so entirely out of proportion to the time required, that the majority of all labors attended by the general practitioner are attended at a distinct financial loss to him, and are cared for only that he may retain the family in his clientele. Naturally under these conditions the tendency is very strong to apply the forceps without the slightest scientific necessity for it, and to look for any reasonable excuse to allow of its use and thus save valuable time. So long as these conditions remain they will furnish very strong extenuating circumstances, but they do not excuse the performance of an operation, no matter how slight the danger. If the business of the family justifies the taking of the case at a reduced fee it also justifies the proper scientific conduct of the case when it occurs. It is of course understood that none of the didactic contraindications, such as unruptured membranes, undilatable cervix or gross malposition of the head should ever be present when the forceps is applied, but I have personal knowledge of instances in which the instrument has been used with absolutely no scientific indication for its application, with membranes intact, until ruptured artificailly, and with cervix so small that the blades could scarcely be introduced; the only reason assigned for interference being that labor had lasted long enough.

Taking all the circumstances into consideration including the ingratitude of the public toward the medical man who is careful, scientific and conscientious, and the pecuniary reward sure to be reaped by the individual who has the reputation of making labor short, I think one can safely take the stand that forceps operation is never justifiable simply to save time, that it is sometimes justifiable on the ground of humanity, as a pain-relieving measure, but that it should only be done after balancing the advantages to be gained with the risks involved in that particular case, knowing that with the head high, the skull large and firmly ossified, the pelvis approaching the lower limits of the normal, the soft structures rigid and not dilatable, or in the absence of proper appliances for aseptic work and proper assistance, nature can deliver more safely and surely even if not more rapidly than the most dexterous operator.—Cleveland Jour. of Med.

*Some Remarks on the Chemical Examination of Urine.

By J. R. Etter, M. D., Crawfordsville, Indiana.

The urine, of all the excretory products of the body, is by far the most important from a diagnostic, and in many cases a prognostic point of view. The prognostic study of the urine is very interesting and important, but the limit of this paper will not permit more than a passing notice. My object is to present some plain rules and formulas, by which the general practitioner may with small expense, and little time, make an analysis of the more important pathologic products, thereby enabling him to state more positively the disease in hand and the hopes and fears for the future.

While it is true that an examination of the urine in many cases cannot be considered complete without the aid of a microscope; yet this part of the subject will not be treated here. It does not require a very extensive outfit to make the ordinary qualitative and quantitative examinations.

Sample for Examination.—Where a qualitative examination only is desired the urine should be obtained two or three hours after a meal. It is a mistaken idea that the early morning is the best, as is in this case, there is less albumin and sugar present than during the process of digestion. The urine should be voided at the office if possible as this will insure the sample to be genuine and fresh. Where the sample cannot be examined within twenty-four hours there should be a few grains of salicylic or boracie acid or hydrate of chloral put into it as a preservative. Where a quantitative examination is desired, the entire amount of urine passed in the twenty-four hours should be collected and noted, from this the sample should be taken. The reason for this is obvious as on the total amount passed will depend the per cent of solids excreted. In all cases the urine should be filtered. In normal urine there are about 967 parts of water, and 33 of solids to the 1,000, and the specific gravity about 1,020; this, however, may vary from 1,015 to 1,025 and still be within the range of health.

Ocular examination will often aid in pointing to the probable contents; as for example if there is almost a lack of color, we probably will find sugar, and on the other hand if it is very dark colored the chances are that it contains large quantities of solids and blood corpuscles. As a rule the lighter the color the greater the quantity passed in the twenty-four hours and vice versa.

A record of all examinations should be kept for further reference. For this purpose one should have a book, in which to record the name, age and analysis of each examination.

The specific gravity will vary to a considerable extent at different times of the day, and it is always well to have several samples for comparison. The great variations that occur under different circumstances as in the matter of food, exercise, etc., should admonish us not to be too hasty in our conclusions at the first examination. It is only when we have made sufficient tests to show the constancy of the abnormal product, that we can form an intelligent opinion as to its pathological significance.

Albumin.—There are several conditions in which albumin may occur in the urine, among which may be mentioned anemia, certain nervous troubles (especially where the vaso-motor nerve is in-

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*Read before the Montgomery Co. Medical Society.

terfered with) some of the infectious fevers, circulatory disturbances, especially in organic heart disease, prolonged fatigue, etc. But it is especially in parenchymatous nephritis and some other affections of the kidneys that the presence of albumin is constant and of greatest significance. In nephritis the percentage of albumin seems to be in proportion to the progress of the disease, and in this case to be of greatest value, quantitative analysis must be made and often repeated. It is a mistaken notion that all kidney diseases are reflected through the urine in the form of albumin, as in interstitial nephritis we may have an entire absense or nearly so of albumin throughout the disease.

Qualitative Test for Albumin.—The old "boiling and nitric acid" test is easily made but errors are liable to occur on account of the precipitation of mucin and phosphates and where only a small amount of albumin is present, no precipitate at all may appear, especially where an excess of acid is used. The following method is simple and easily made and will show the most minute trace of albumin. To about two drams of urine add half dram of solution of ferro-cyanide of potash (1 to 20) shake well and add a few drops of dilute acetic acid (50 per cent.), if albumin be present, it will occur in a minute or two as a milk-like opacity diffused throughout the contents of the tube. The best check test that can be readily made is as follows: Fill test tube two-thirds full of urine, add one-sixth as much of a saturated sodium chloride solution, then fifteen to twenty drops of 50 per cent acetic acid, boil the upper half inch of the solution, when the smallest trace of albumin will appear in the boiled portion. Either of these tests are positive and readily made, but the ferro-cyanide is the more simple and all that is generally required. In cases of albuminuria the physician should make comparisons often and should not be content with chemical examinations alone but he should call the microscope to his aid.

Quantitative Test for Albumin.—With an albuminometer the quantity may be approximately determined as follows: Make a solution of picric acid forty-three grains, citric acid ninety-five grains, distilled water to measure twenty ounces, fill albuminimeter with urine to letter "U" then add test solution to "R," shake well and set aside for twenty-four hours, when the amount of precipitate may be read from the figures on lower part of tube. By this means the per cent as well as total quantity excreted may be computed with considerable accuracy.

Sugar.—The next important substance that I will mention is sugar There would probably be found a trace of sugar in 90 per cent. of cases examined, and in fact some authorities claim sugar is a normal constituent of the urine, and that it is only when in excess that it becomes of pathologic significance. Temporary glycosuria is very common and may occur in various fevers (especially scarlet fever), in diseases of the lungs, liver and brain. I believe that sugar in quiet appreciable quantities will always be found in severe cases of phthisis pulmonalis. There are a large number of foods and medicines that cause sugar to temporarily appear in the urine. Among the most commonly used drugs may be mentioned morphia, strychnia, salicylates, mercury, turpentine, etc. I will also add acetanilid. This latter substance I have not seen noted so far by any authority. Acetanilid or the derivatives of coal tar have become of such popular use by the laity for headaches that it is important to ascertain whether the subject is an acetanilid fiend or not.

Qualitative Test for Sugar.—Solution: Dissolve forty-five grains of copper sulphate in six drams of distilled water, then add six drams of glycerine and seven and a half ounces of liquor potassa. Test: Boil about one or two drams of solution, then add six to eight drops of the urine and gently boil again, when a yellow or yellowish-red precipitate will indicate sugar. Care must be used not to add more than six or eight drops of urine. This test solution will keep indefinitely and is always ready for use. This is an extremely sensitive test and will show the smallest amount of sugar, even with but one drop of urine. I consider this a much more satisfactory test than Fehling's. In the Fehling test we must have two separate solutions, and even they do not keep well.

Quantitative Test for Sugar.—In cases of diabetes mellitus, it is very important to compare the quantity of sugar extracted from time to time. Thanks to Prof. Purdy, he has given us a comparatively easy method to determine the quantity of sugar in a given amount of urine. Solution: Dissolve twenty-two grains of copper sulphate and three drams of glycerine in two ounces of distilled water. Then dissolve one hundred and seven grains of potassium hydroxid in two ounces of distilled water; mix, and when cool add four and a half ounces of strong ammonia and distilled water to make exactly ten ounces. Test: To ten drams of the boiling solution, add urine slowly till the blue color is neutralized. It takes exactly one-third of a grain of sugar to destroy the color in ten drams. By knowing the amount of urine used, we can readily estimate the amount to the ounce, and for the total twenty-four hours. While this total may not be absolutely correct, it is nearly so that the tedious process of evaporation and weighing need not be resorted to.

Urea.—Urea being composed of nitrogen and the tissue metamorphosis of the body, is the most bulky of any of the solid constituents of the urine, and as it is highly toxic, it is of the greatest importance. Being constantly formed in the economy, it is also necessary that it be eliminated, or serious results must of necessity follow. In Bright's disease and some others the excretion of urea is diminished, and hence we have uremic poisoning. There are many causes for the variations in the quantity of urea excreted, even within the health limit, but this does not come within the scope of this paper. In cases of albuminuria the amount of urea is generally diminished and based largely on this fact is the prognosis. It is therefore highly important to know the amount thrown off during the twenty-four hours. The process necessary for determining this fact requires considerable care.

Quantitive Test for Urea.—For this test it is necessary to have two separate solutions. One, solution of sodium hydroxid, six ounces to the pint of distilled water, the other pure bromine. Take ten parts of the sodium to one of bromine, then add an equal amount of water, when it is ready for use. The bulb of the ureameter is then filled with the test solution and one dram of the urine is discharged up in the tube. The decomposition of the urea forms a gas which displaces the fluid in the tube, and the amount of the displacement can be read off and will give the total urea or per cent contained in the specimen.

There are many constituents of the urine, such as phosphates, urates, bile, blood, tube casts, etc., that in some cases are of extreme importance, some of which can be determined chemically and some that require the microscope. However important these may be, it is not my intention to discuss them. The centrifuge is of the greatest value in many cases, but is mainly useful for microscopic work.

The urine is one of the most reliable guides we have in measuring the variations of nutrition and waste of tissue. While it will not be claimed that all diseases can be diagnosed by urinary examinations, yet it is equally true that no serious patholigical condition can long exist without being reflected through the urine. By frequent examinations the physician may most surely know which way his case is progressing, either forward or backward. It is now almost impossible for a person to join any of the leading life insurance companies without a chemical, and in many cases microscopical examination of the urine. These companies have kept mortuary tables for many years and are fully aware of the great importance this function bears to the expectancy of life. In the present state of our knowledge, a surgeon would be slow to recommend any important operation, except when life is immediately endangered, where any great amount of albumin or sugar was present, as they are warnings of lowered vitality, a condition that cannot be ignored in process of repair. During the latter months of pregnancy deficiency of urea is one guide post that points to puerperal eclampsia and admonishes us to use prophylactic measures in time to ward off this most distressing condition. I believe it should be the rule to examine all cases at least once a week during the last month of pregnancy, as there are no subjective symptoms noticeable that would point to impending danger, as I once learned to my sorrow some years ago. The only excuse I have for writing this paper is the lax attention given to the subject by the profession at large. I have known practitioners to test for albumin with the Fehling solution. To test for the three substances mentioned above, only six or eight reagents are necessary, and these can be made stable so as to be ready for use at all times. On the front of each reagent bottle you should have a label stating what the solution is for, and on the back have the formula and directions how to use. This will save much time in referring to authorities, as one cannot always remember the necessary steps in using the various tests. I hope the simplification of the analysis here given will stimulate a closer study of this most important subject.—Medicus.

Medical Miscellany.

VIABILITY OF THE BACILLUS PESTIS. Bulletin No. 4 of the Hygienic Laboratory, Treasury Department, U. S. Marine Hospital Service, Walter Wyman Surgeon General, M. J. Roseneau director, in dealing elaborately on the above topic, concludes as follews:

(1) The bacillus pestis is not a frail organism. It resembles the hemorrhagic septicæmic group or the cocco-bacilli as far as its viability is concerned.

(2) Temperature is the most important factor in the viability of the plague bacillus. It keeps alive in the cold, under 19 degrees Centigrade, a very long time. It dies quickly, especially when dried, at the body temperature, 37 degrees Centigrade.

(3) Moisture favors the life of the bacillus pestis. It usually dies in a few days when dry, even in the presence of albuminous matter, provided the temperature is above 30 degrees Centigrade. It may keep alive and virulent when dry for months in the cold, under 19 degrees Centigrade.

(4) Sunlight kills the organism within

a few hours, provided the sun shines directly upon the organism and the temperature in the sun is over 30 degrees Centigrade. The effect of sunlight is not very penetrating.

(5) The virulence of the bacillus pestis is often lost before its vegetability.

(6) It is unlikely that new, dry merchandise would carry the infection. The organism usually dies in a few days on the surface of objects such as wood, sawdust, bone, paper, etc.

(7) Clothing and bedding can harbor the infection for a long time and may act as fomites. The bacillus lives for months when dry in albuminous media at temperatures under 20 degrees Centigrade.

(8) Food products may carry the infection of plague. The bacillus lives a long time in milk, cheese and butter. It usually dies quickly on the surface of fruits and prepared foods.

(9) The organism may live a long time in water, although plague is not a waterborne disease.

(10) The plague bacillus does not live long on paper, and first class mail is therefore not apt to convey the infection.

(11) The colder the climate the greater the danger of conveying the infection on fomites—clothing, bedding, food, merchandise, etc.—and more extensive disinfection is required in such a climate in combating the disease than in tropical regions.

(12) The plague bacillus is destroyed by sulphur fumigation, and by formaldehyde gas in the strength in which these disinfectants are usually employed. The gases can only be depended upon as surface disinfectants. In disinfecting ships, warehouses, dwellings, and other places infested with rats, fleas and vermin, sulphur is better than formaldehyde, because formaldehyde gas fails to kill the higher forms of animal life.

(13) A temperature of 70 degrees Centigrade continued for a short time is invariably fatal for the plague bacillus. The ordinary antiseptics are all efficacious in their usual strength for non-spore-bearing organisms. Efficient surface disinfection may be accomplished by exposing objects all day to the direct sunshine on warm days. The temperature in the sun must be above 30 degrees Centigrade.

THE DIFFERENTIAL DIAGNOSIS OF SMALLPOX. J. MacCombie, in the London Lancet, says that in the diagnosis of this disease the following rules should be observed: (1) It should never be forgotten that the initial symptoms of smallpox are most constant both in vaccinated and unvaccinated subjects. (2) When called to a case, the practitioner should never take for granted that the eruption on the trunk is like the eruption on the face and extremities, but in every case he should examine the whole eruption. Diregard of this precaution leads to many mistakes. (3) It should not be assumed that because a case of smallpox has occurred in a house, therefore a vesicular eruption appearing on another inmate of the same house about the same time is smallpox. He has known cases of chickenpox and smallpox occurring simultaneously in the same house, and smallpox and enteric-fever cases in the same family at the same time. (4) It should be remembered that in a very large number of vaccinated subjects, smallpox is so mild that as soon as the eruption—consisting sometimes of not more than half-a-dozen spots—has appeared, the patient feels well. (5) Care should be taken to avoid ascribing the spots on the face in a mild case to digestive disturbances, and sending the patient to the seaside for a little change of air. The author passes in review the diagnostic points between the disease and erythema multiforme, typhus, influenza, ptomain poisoning, roetheln, drug rashes, varicella, measles, syphilis eruptions, herpes, impetigo, eczema, urticaria papulosa, acne, rheumatic sudamina, glanders, and pyæmic skin eruptions.

THE CARNEGIE INSTITUTION. Ex-President Gilman, of the Johns Hopkins, one of the trustees of the new institution for the foundation of which Mr. Andrew Carnegie has given $10,000,000, recently outlined its scope in a lecture delivered in Baltimore. The plan as outlined by Dr. Gilman is more universal than the university, and is broad enough to cover the whole field of human effort and achievement. It involves no rivalry with existing institutions, nor yet the establishment of a new one in the sense of a separate college or university with a resident faculty. Its privilege will be extended to anybody, young or old, white or black, man or woman, graduate or undergraduate, native or foreign. If a mechanic, a student, an inventor, or an institution is found to be developing a special line of work toward the welfare or improvement of mankind, such individual, or institution will be considered a proper object for assistance, if such is needed to insure success. It is not intended to build expensive permanent laboratories, when necessary laboratories may be constructed for specific purposes, but they will be of a temporary character. There will be no imposing group of buildings, and such administration buildings as may be necessary will be very modest. There will be no terms of admission or graduation, and no prescribed courses of study. It will be for the encouragement of practical workers, and not an institution for the promotion of higher learning or of learning of any degree. It will be a corporation for the creation of knowledge rather than for its promulgation. Doubtless, medical research, along with other departments of scientific and learned investigation will profit by this example of Mr. Carnegie's philodory.—Med. Record.

CURABILITY OF SYPHILIS. Speaking of the curability of syphilis in the symposium upon that disease in the October number of the International Medical Magazine, William S. Gottheil, of New York, takes exception to the opinion of its practical incurability which is prevalent in certain quarters. Every day experience shows that the great majority of cases are cured in every practical sense, the occasional late relapses and accidents to the contrary, notwithstanding. He concludes:

1. Syphilis is a curable disease, and may even, with restrictions, be called a self limited one.

2. Whilst cure in a given case cannot be affirmed with scientific accuracy, the chances of its being the fact after a certain time under proper treatment are so great that it may be properly claimed to have been affected.

3. Practically, a patient who has been properly treated throughout the active stages of the disease, and who has had no manifestations of its persistance for several years thereafter, may be regarded as cured, and may be told so.

TREATMENT OF BRONCHO-PNEUMONIA. Caille (Post-Graduate) says that the great danger in this disease is suffocation, through filling up of the air cells with secretion and from heart failure and pulmonary edema. Here heart tonics and expectorants are indicated. In desperate cases raise the foot end of the bed four inches, and so get gravitation of secretions toward the mouth or make use of artificial respiration. Good results from venesection are hardly to be expected in young children. As a stimulant and heart tonic he uses camphor, strychnine or nitroglycerin, and occasionally digitalis or ammonium carbonate. You may give half a grain of camphor in five grains of sugar or

Camphor gr. 15.
Ol. amyg. dulc. dr. ii.
Sig. Five minims hypodermically.

Or you may give champhor (½ gr.) digitalis (1 gr.) and benzoic acid (3 gr.) combined. Caffein and sodium benzoate (1 to 2 gr.) may be given hypodermically. Whisky and water may be given if necessary. If the fever is from 105 to 106° F. and there is such twitching that convulsions are feared, antipyrine (3 to 5 gr.) may be given in water per rectum. This will reduce the fever two or three degrees for several hours. When the acute attack is over and resolution is delayed, potassium iodide should be given by mouth or by rectum. In delayed resolution, with or without fever, think of serous or purulent effusion, and use the aspirating needle to detect it.—Med. Standard.

PREVENTION OF TUBERCULOSIS. Dr. J. F. McDonald, of Hopewell, N. S., in an article in the January Maritime Medical News, on "The Duty of the Medical Profession in the Prevention of Tuberculosis," says that in order to accomplish anything definite in the work of prevention certain legislation is necessary, viz:

1. To prohibit spitting on the streets, in all public buildings, wherever people congregate, and all public conveyances.

2. To provide for sanitary inspection of all public buildings and public conveyances.

3. To prohibit tuberculous persons from teaching in our educational institutions.

4. That all teachers, from those teaching in our primary schools to the university professor, shall be subject to medical examination and have a clean bill of health before being allowed to teach. The medical examination to be repeated every two years.

5. Also medical examination of all students attending public schools of all kinds. All tuberculosis teachers and pupils should be prohibited entering the public schools. It is well known that our schools are prolific centers of infectious diseases.

6. Sanitary inspection of school buildings and premises as well as medical inspection of those attending schools is necessary.

7. Sanitary inspection of all places where food supplies are prepared and sold and medical examination of all persons employed in and about such places. The coughing, spitting consumptive must be prohibited from handling and coughing over our groceries and baking our bread.

8. It is well known that the animals from which we get a very large portion of our food supply are infected with tuberculosis; it is therefore necessary that these animals be carefully examined, and sanitary inspection made of the places where they are kept. Especially is it necessary to inspect our dairy stock, that the cows from which we get our milk should be perfectly healthy and free from tuberculosis. Sanitary inspection of dairies, creameries, cheese factories and products of these places. Tuberculous persons should be prohibited from working with and handling milk and its products. There is no article of food so generally used as milk. Children are largely fed upon milk; hence the necessity of having a pure article free from germs.

EYE PRACTICE. Large doses of potassium iodide are indicated in optic neuritis, ocular paralysis, charoiditis serous iritis, relapsing iritis, cyclitis and interstitial keratitis.—Baker, Med. Rec.

BACKWARD DISLOCATION OF THE ASTRAGALUS. Dr. W. Jepson, Sioux City, Iowa, in the Western Med. Rev., for Feb., in an article on treatment of above, summarizes:

1. My own experience and the results of recorded cases lead me to believe that it will rarely be possible with our present knowledge and technique to bring about a reduction of a backward dislocation of the astragalus without opening the joint and bringing about a reposition of the bone by direct manipulation.

2. With our present command of aseptic surgery I see no reason why this should not be undertaken in all cases uncomplicated by severe infection, with good prospects of securing a nearly perfect result.

3. Removal of the astragalus being reserved for such cases where the bone is completely separated from its ligamentous attachments, consequently having no adequate source of blood supply.

4. Amputation being resorted to only in such cases where the dislocation is compound and infected to a degree impossible of removal, and the patient's life jeopardized by the septic intoxication or infection.

NEW HOSPITAL AT FARGO, N. DAK. In our next number we hope to print a sketch of the new hospital at Fargo, North Dakota, to be built by Dr. Henry A. Beaudoux.

TRANSMISSION OF SYPHILIS FROM PARENT TO OFFSPRING. W. Friedlander reports in the Berliner klinische Wochenschrift, January 20, the study of the infection of an entire family with syphilis, and brings out several interesting points in this connection. The father became inoculated with the disease while his wife was in the fifth stage of pregnancy. He immediately began mercurial treatment. The child was born free from syphilis, and the wife did not contract the disease at this time. Shortly following this the father discontinued treatment, the symptoms of the disease having disappeared. In about a year syphilitic manifestations returned and he again began the use of mercury. Following this the wife again became pregnant, and in due time was delivered of a healthy child. She likewise showed no signs of syphilis. The father now again discontinued treatment, which was never resumed. One year thereafter the wife developed syphilis, and the two children subsequently came down with the disease. Friedlander ascribes the development of the disease in the children to direct contact with an infected father and mother. These cases illustrate how a syphilitic father, under the influence of mercury, can procreate healthy children and not infect his wife, so long as he continues the use of the drug.

WHAT SHALL WE DO WITH THE CONSUMPTIVE? A. Fanoni in Am. Med., Feb. 8, recommends the following measures for the abatement of tuberculosis: (1) Marriage of consumptives should be avoided; (2) Children of consumptives should be so brought up as to strengthen their systems against the invasions of the tubercle bacillus; (3) The public should be educated to realize the fact that consumption is curable in its initial stages, i. e., when mixed infection has not yet taken place; (4) An early diagnosis is the secret of cure. Let us drop the word "cold" as a term for a little cough and a subnormal temperature, and the word "malaria" for cough accompanied by chills, and let us examine the patient carefully in each case. When questioning the patient it must be borne in mind that the consumptive, fearing to hear the word "consumption," often tries to disguise his symptoms, and that it is in such cases that the skillful physician proves his ability; (5) Every case of pulmonary tuberculosis should be reported to the local health authorities so soon as the diagnosis is made; (6) Every consumptive should be isolated until cured, or until the disease terminates fatally.

Book Notices.

COHEN. A SYSTEM OF PHYSIOLOGIC THERAPEUTICS. A Practical Exposition of the Methods, Other than Drug-Giving, Useful in the Prevention of Disease and in the Treatment of the Sick. Edited by Solomon Solis Cohen, A. M., M. D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic; Lecturer on Clinical Medicine at Jefferson Medical College; Physician to the Philadelphia Hospital and to the Rush Hospital for Consumption, etc. In Eleven Octavo Volumes. American, English, German and French Authors. VOLUME VI, DIETOTHERAPY and FOOD IN HEALTH. By Nathan S. Davis, Jr., A. M., M. D., Professor the Principles and Practice of Medicine in Northwestern University Medical School; Physician to Mercy Hospital and Wesley Hospital, Chicago; Member American Medical Association, etc. Published by P. Blakiston's Son & Co., 1012 Walnut st., Philadelphia, 1901. Price for the set complete, $27.50 net.

The absorbtion of foods and their assimilation, together with their effect upon the human system, both in health and in disease, afford a most intensely absorbing study for the practitioner as well as the layman, and any new light on the question of dietetics will be hailed with delight by all. That the above work sheds considerable light upon the subject is evidenced by a careful perusal of the letter press, which gives full scope to the latest consensus of deductions from the experiences and experiments of eminent practitioners in a highly scientific manner.

The pages are about evenly divided into part one and part two, the former dealing with "General Principles of Diet, and Diet in Health," and the latter with "Diet in Disease."

The chapters in part one are on the tollowing topics: 1. Food in Health. 2. The Uses of Water in Dietetics. 3 and 4. The Elements of Food. 5. Quantity and Kind of Food Needed in Health. 6 and 7. Animal Foods. 8. Vegetable Foods. 9. Beverages. 10. Diet in Health. 11 and 12. Infant Feeding. 13. Food as a Cause of Disease.

Part two contains the following subjects: 1. Feeding the Sick. 2 and 3. Diet in Infectious Diseases. 4. Diet in Diseases of the Stomach. 5. Diet in Diseases of the Blood. 6. Diet in Diseases of the Intestines, Liver, and Peritoneum. 7. Diet in Diseases of the Respiratory Organs. 8. Diet in Diseases of the Circulatory Organs. 9. Diet in Diseases of the Kidneys. 10. Diet in Diseases of the Nervous System. 11. Diet in Diseases of the Skin. 12. Diet in Disorders of Nutrition.

MEDICAL DIAL

A Monthly Record of Medicine and Surgery

Published by MEDICAL DIAL COMPANY

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SUBSCRIPTION PRICE

United States, Canada and Mexico, per annum, in advance, - - - - - - - - - - - - - - $1.00
Foreign Countries in the Postal Union, per annum, in advance, - - - - - - - - - - - - - 1.50

N. B. Matter for the reading pages should reach office of publication on the 20th of the preceding month and display advertising on the 25th, to insure attention.

Vol. IV **MINNEAPOLIS, MINN., APRIL, 1902** **No. 4**

VACCINATION AND VIRUS.—At a late meeting of the New York Academy of Medicine the subject of vaccination was before the members with special reference to the relative advantages of glycerinated vaccine and dried lymph. The discussion is timely while smallpox is prevailing so widely in this country and in many places abroad, especially in London, the head-center of the discovery that has done so much to relieve the world of one of the greatest scourges known to the human race, and to prevent the hideous impairment of the faces of those who survived the disease. We want now only the best virus as free as it can be produced from outside contamination, by scientific preparation.

At the meeting, as reported by the New York Medical Journal, Dr. Rosenau, of the Marine-Hospital Service, presented a paper dealing exclusively with the comparative number of micro-organisms found in numerous examinations of the two forms of virus mentioned above. The specimens were all obtained in open market, and in most instances the dried and glycerinated vaccine of a given producer were compared; but not in all, for a few producers do not furnish both varieties of vaccine. Dr. Rosenau's observations seem to establish the fact that glycerinated virus was usually freer from bacterial contamination than dried lymph, though the representative of the Journal at the meeting got the impression that the largest number of bacteria found in any single specimen had been in a sample of the glycerinated virus. A prominent feature of the report of the doctor is in the showing of immense numbers of bacteria present in many specimens of glycerinated vaccine, and a great range of these numbers. From these findings it is inferred that in many instances the producers of glycerinated vaccine were putting too "green" an article on the market, an article that had not been sufficiently acted upon by the glycerine. Prolonged action, the doctor said, "was necessary, after which, for a comparatively short time, the virus was of standard vaccinal potency without more than a minimum of toxic virulence, but after that it declined in efficiency."

Dr. Fiedler presented the bacteriological consideration of the two forms of virus from a clinical point of view, reporting the results of his observations in a large number of recent vaccinations of infants, giving the percentages of success and failure with each form, together with the practical details as to the severity of the resulting lesion, etc. The report was decidedly favorable to the glycerinated virus; but the editor of the New York Medical Journal thinks the inference of the doctor is invalidated by the evident fact "That the dried lymph used by the doctor was of remarkably poor quality, the results he obtained with it being only such as one would expect to meet with in secondary vaccinations, provided a good specimen of dried lymph was employed. In a considerable number of Dr. Fielder's comparative tests the dried lymph used was that obtained after the removal of the "pulp" from the pock, and it appeared that his object, in part, had been to test the efficiency of such lymph as compared with what may be called the "whole" lymph, namely, that which filters through the "pulp." This "pulp" is a milk-white layer of pultaceous matter consisting of dead epidermis, together with the necrosed tips of such of the underlying papillæ of the derma as may have been severely enough affected by the vaccinal congestion. This is the material out of which glycerinated vaccine is manufactured. This "pulp" is very potent, but it swarms with bacteria; the object of the glycerinating process is to render these bacteria harmless."

Dr. Huddleston, of the city board of health, reported certain experiments which had been made in the board's labratory on the question of the possibility of vaccine becoming contaminated with the tetanus germ in the ordinary process of collection. The conclusion was that the possibility existed—merely as a possibility, but practically, the thing had never occurred, and in all probability it would never occur. If this "possibility" exists it would seem as though it ought to have happened when the "crusts" of the pock were so generally used for vaccination as they were a few years ago. To take the exudation of the pock with its mixture of dirt from exposure to the air and soiled clothing during its formation, and use it now for vaccinating, would subject the vaccinator to severe criticism at least, and yet no report, so far as we remember, was ever made of tetanus following vaccination from such material.

We believe the ideal vaccination is the transmission of the pure lymph directly from the pock of a first vaccination of a healthy child to the person to be vaccinated. This would certainly obviate the danger of any contamination from outside conditions, and the virus might only require an occasional renewal from the bovine stock to increase its potency.

It is the general impression among the people that one successful vaccination is sufficient to protect them from an attack of smallpox; and in a large majority of cases it is sufficient, or at least to modify and ameliorate the severity of the disease; but the fact should be generally known and acted upon that repeated vaccinations in many instances are necessary to fully protect the individual and render him immune. One case was known to the writer that after six successful vaccinations died of confluent smallpox; but this was one case perhaps among millions, and may not occur again. A few more vaccinations might have rendered that person immune; but even one attack of the real smallpox does not always protect the patient from a second attack, and why then should we expect a single vaccination in all cases to be sufficient?

"MEDICAL" ADVERTISING IN THE LAY PRESS. One of the most insidious crimes of the day is continually being committed by many of the daily press. This crime consists in the insertion in the advertising columns of such indecent and suggestive advertising matter that it is a wonder a man who has any respect for his family will permit copies to be delivered at his house. For instance, take a run down the personal columns of some of the dailies and note the nostrums which are claimed to guarantee relief to ladies in trouble. Then again, glance through the display columns and note the thousand and one bottled and pill goods warranted to cure nearly all the evils to which flesh is heir, to say nothing of the quacks who guarantee to cure anything from a venereal wart to gonorrhea of the stomach for a nominal sum and no delay from business, and strictly confidential. These same advertisers absolutely guarantee to cure all troubles from bellyache to consumption with a contemptible assurance.

Such a class of advertising has a threefold influence for evil.

First—Patients cannot very often diagnose their own ailments, and, therefore, cannot prescribe for themselves. They may, sometimes, secure the principal remedy, which may be advertised, but need additional treatment to obtain relief. This additional treatment must be selected by some one who is trained in this line of work—by the physician. Very often the individual makes the wrong selection, and by swallowing the vile stuff is made worse, indeed, if his life is not endangered.

Second—Another important matter is the suggestion to the minds of those who are ill. By reading the advertisements the symptoms described will be made to fit most anybody and the deluded patient will conclude he has it sure, and will forthwith visit the nearest drug store. The result is often hazardous.

Third—Still another very important injury to the public is the bad moral influence upon society. This is perhaps the worst evil of all.

ELECTRICITY AND LIFE: The Professor of Physiology in the Chicago University, Dr. Jacques Loeb, is attracting the attention of the men of science and the world at large by the publication of his investigations in biology, and especially by his alleged discovery of the production of life in the unfertilized eggs of the sea urchin by electrical currents. Before this theory can be accepted as true it would seem necessary that the doctor should prove, beyond a reasonable doubt, that the eggs used in his experiments were not fertilized; this might be a difficult problem to solve, when it is well known that one act of fertilization is sufficient with some insects for the remainder of life, and that it is just possible in nature that the power of fertilization might extend to several generations. Electricity and heat will develop life where there is a vital germ; but we do not yet believe the male can be entirely eliminated from the reproduction of organized animals.

The International Congress of Medicine will convene in the City of Madrid, Spain, April 23d to 30th.

The Oklahoma Medical Journal and the Oklahoma Medical News have consolidated their interests, and the name of the new publication is the Oklahoma Medical News-Journal.

Dr. Henry H. Morton, of Brooklyn, says that he often tells his students that syphilis is the only disease which they require to know thoroughly. "Know syphilis in all its manifestations and relations and what remains to be learned will not stretch the pia mater of a megalocephalic senior student."

Dr. Christian Fenger, of Chicago, died March 7 of pleuro-pneumonia.

If physicians who write long-winded articles for the medical journals will draw their articles to a close with a compact series of conclusions, or a paragraph resume of the whole, they will confer a boon upon other publications whose collaborators and writers do not have time to wade through the letter press.

It should be remembered that potassium permangamate can ignite glycerine or alcohol and detonates when rubbed up with confect. rosae.

La Grippe.

By W. B.Parosns. M, D., Missoula, Montana.

Most of the late writers speak of this affection as an acute contagious disease, produced by the bacillus of Pfeiffer. This bacillus is reported to have been discovered by Pfeiffer and Canon in 1892. While it has been found to accompany la grippe, it has not been demonstrated to be the cause of this disease. It would be better, therefore, with the light we now have to guide us to designate la grippe as an infectious disease, occurring, at shorter or longer intervals in various parts of the world, as a pandemic, affecting the mucous membranes of the respiratory organs and the nervous system, with possible involvement of any other tissues or organs of the body, and probably due to baccilli. Pfeiffer may have discovered the specific organism which causes influenza or la grippe, but he was not the first to announce the theory of a germ origin. This theory was maintained by many investigators more than forty years ago. While Watson held to the ozone theory, he wrote, as long ago as 1857, as follows:

"Another hypothesis, more fanciful, perhaps, at first sight, than these, yet quite as easy accommodated to the known phenomona of the distemper (influenza), attributes it to the presence of innumerable minute substances, endowed with vegetable or animal life, and developed in unusual abundance under specific states of the atmosphere, in which they float and by which they are carried hither and thither. Myriads of these animalcules or of these vegetable germs coming in contact with the mucous membranes, and especially with that of the air-passages, iritate (it is imagined) those surfaces, and exercise a poisonous influence upon the system. Now, the sporules of certain fungi which ruin the health and destroy the vitality of larger plants on which they pray are inconceivably small. I shall prove to you, presently, that vegetable effluvia are capable of producing, in the human body, symptoms not very dis-similar from those of influenza. Again, that the waters of this globe swarm with living creatures which are invisible by our unaided eyes, the microscope has taught us. Others too minute to be estimated even by that wonder-showing instrument, in all probability exist. We cannot doubt that the gaseous fluid which surrounds this planet equally teems with living atoms. We know that multitudes of insects and cryptogamous plants, infinite in number with respect to our finite powers of computation, are sometimes suddenly hatched or developed in places which were previously free from them. It is easy to conceive that atmospheric infusoria (so to speak) may rapidly congregate or vivify in masses sufficient to render deleterious the very air we breathe. If this be so, we can understand how such a cause of disease may first act here and there, and presently overspread large districts; how it may move or be wafted from place to place, or be carried about by persons; how its course and operation may be circumscribed and definite; and how some germs or ova may remain after the visit, retaining their vitality, and ready in future seasons again to start into life and activity under favoring circumstances. Taking the insect hypothesis, and knowing, as we do, that some animal poisons (that of small-pox, for example) have the singular property of multiplying themselves in the human body like yeast in beer, we may conceive that diseases produced by animalcules may thus infect the fluids of the body and become contagious in the fullest sense of that term. Lastly, the uniform duration of these epidemics has been supposed to add probability to the notion that they result from the operation of organic principle which has its definite periods of growth and decay.

"All this is sheer hypothesis, but I have nothing better than hypothesis to offer you. You may choose from among them or you may reject them all, as the bent of your minds may incline. That which commends itself to my own acceptance, and which may also be most easily put to the test when the opportunity shall arise, is the ozone hypothesis."

These prophetic words of Watson indicate that many of the discoveries of late years have their starting point in ideas or principles proclaimed by investigators of a former generation, and this fact should teach us not to appropriate to ourselves all the credit of recent progress in medical science.

Whatever may be the cause of la grippe, it certainly inhabits the atmosphere alone. Whether it is generated here or derived from other sources and distributed through this medium, future investigation must determine. Meteorological and telluric influences, or different conditions of the atmosphere as regards temperature and moisture, exert no other than modifying effects on this disease. The theory of ozone, advocated by Schoenbein and Watson, with the light we now have on the causes of disease, cannot claim any attention. On the other hand, its oxidizing properties should render it antagonistic to toxic conditions of the atmosphere. The germ theory is more rational than any other, and is at the present time generally accepted. The predisposing causes are few. Young adults and aged persons are most liable to attacks, for the reason, perhaps, that the former carelessly expose themselves and are ignorant of the dangers inseparable from the operations of la grippe, while the latter, from the exhausted or worn-out condition of their organs, have less power of resistance to meet the insidious and progressive inroads of the disease. The initial operations of la grippe are generally limited to the mucous membranes of the respiratory passages and the nervous system. A rigor, followed by more or less fever with headache, muscular pains, watery eyes, nasal, laryngeal and possibly bronchial irritation; a persistent dry, peculiar-sounding cough, and an unaccountably nervous prostration, mark the invasion of this disease. This disease is protean in its manifestations, which vary from the mildest catarrhal type to the gravest congestive and inflammatory forms, involving many different tissues, and organs o fthe body. The force of the disease may fall on the respiratory organs, the gastro-intestinal tract, or the heart; it may, also, assume a typhoid or rheumatoid type; but in none of its forms do we find anatomical lesions commensurate with the gravity of functional disturbances. The most dangerous complications of this disease are pneumonia and heart failure. By guarding against such involvements, the patient may look forward to a speedy recovery. The beginning of the attack requires prompt and efficient treatment. The patient should be kept in his bed until the acute stage is passed, and then should be advised to remain in the house until he has thoroughly recovered from muscular and nervous exhaustion. Neglect of this precaution may occasion a relapse with dangerous, if not fatal, consequences. In neuropathics and aged, debilitated subjects, enforcement of the above advice is imperatively demanded. The medical part of the treatment, especially in the incipiency of the disease, is simple but important. Bearing in mind that in this disease there is always a tendency to a rapid lowering of all the vital processes, the selection of medicinal agents must be made with a view of counteracting that tendency, as well as combating other urgent symptoms. While every case must determine the details of treatment, the writer has found the following prescription in the early stage of the disease to approach nearer a specific than anything he has ever tried:

R
Ammon Chlor .... ʒii
Cordial Codliver oil Comp. (Hagee) ℥viii.

M. Sig. Take a tablespoonful four times a day, alternate with a five-grain pill of quinine and continuing preparation until restoration is complete.

This prescription should usually be preceded by a brisk mercurial purgative. Of course this treatment is intended for an adult in the average physical condition of this class of patients.

After complications have developed the treatment must be along the line of special indications.

Case of Thomas P. Boden, the Consumptive Irish Immigrant. Its Medical, Sociological, International and Humanitarian Aspect.

By S. A. Knopf, M. D., New York City.

If Mr. Francis Tracy Tobin, the counsel for Thomas P. Boden, the Irish immigrant now detained by the immigration authorities because he is consumptive, should succeed in bringing this case before the Supreme Court of the United States, this, the highest tribunal of our country, will have to decide a most momentous question. The issue involved not only affects the few consumptive immigrants who may arrive at our ports, but it affects the several million American citizens suffering from pulmonary tuberculosis.

On the strength of a declaration of the surgeon-general of the Marine-Hospital Service that pulmonary tuberculosis is a dangerous contagious disease, the superintendent of immigration issued last June an order that in future immigrants with tuberculosis of the lungs must be debarred from all ports of the United States regardless of boards of special inquiry, which heretofore had used their discretion in the matter. Formerly the board of special inquiry at this port, after receiving the report of a case of tuberculosis from the chief of the medical division of the immigration service of New York, could exercise discretion as to the admission of the person, and there have been instances in which a child ill of the disease has been permitted to land with its parents; but henceforth no one with consumption will be admitted to the country. This rule applies to alien passengers in the first and second cabins as well as to those in the steerage.

Is this declaration issued by the surgeon-general of the Marine Hospital Service, and strengthened by the authority of the Treasury Department, based on scientific observation? Is this opinion shared by other great authorities on the question of tuberculosis and the medical profession of the United States in general?

Ever since the discovery of the tubercle bacillus it has been demonstrated by clinical and bacteriological experiments all over the civilized world that the germ alone is the direct cause of the disease, and without its presence tuberculosis can not be conveyed. The bacilli are usually contained in the expectoration, more rarely in other secretions, very rarely in the muscular or osseous tissue. Thus the contact *per se* of a consumptive individual does not transmit the disease, and pulmonary tuberculosis is not a contagious but only a communicable malady. The destruction of tuberculous expectoration and other secretions, also of tuberculous food substances, suffices to do away with all danger of infection and transmission. Therefore, there is no scientific basis on which to classify pulmonary tuberculosis among the dangerously contagious diseases, and it is contrary to the results of experience and experiments of all who have studied the question thoroughly.

Now, what have the great European and American medical authorities to say on this subject? Koch, the discoverer of the tubercle bacillus, says in this connection in his recent London address, which I quote verbally, since it was delivered in English: "A consumptive who coughs out tubercle bacilli is not necessarily a source of infection on that account so long as he takes care that his sputum is properly removed and rendered innocuous." Professor Herman M. Biggs, whose splendid work in the prevention of tuberculosis has been most highly commented on by Koch in the same address, declares in the circular issued by him through the New York Health Department: "If the matter coughed up be properly destroyed a person suffering from consumption may frequently not only do his usual work without giving the disease to others, but may also thus improve his own condition and his chances of getting well." This circular has served as a model to many health boards in this country and abroad. Concerning the action of the Treasury Department in regard to tuberculous immigrants—not paupers—Dr. Briggs pronounced it unscientific, unwise, unnecessary and inhumane. Dr. T. Mitchell Prudden, professor of pathology and bacteriology at the College of Physicians and Surgeons, declares distinctly that pulmonary tuberculosis is a communicable and not a contagious disease.

For the United States government to declare pulmonary tuberculosis to be a dangerously contagious disease, in spite of the opinions of these great authorities, stamps several millions of American citizens suffering from consumption with a stigma wholly undeserved. That the general profession is in thorough accord with the opinion expressed by Professors Prudden and Briggs may be gleaned from editorials which appeared in three of the leading American medical journals. Dr. Frank P. Foster of the *N. Y. Medical Journal* says in an editorial of June 22: "It is our conviction that the United States Bureau of Immigration, if it has really determined upon the course of indiscriminately excluding consumptive immigrants from the country, as has been announced, has been ill-advised. * * * What the people need to be taught—and they have already partly learned the lesson—is, not that pulmonary tuberculosis is a monster to be fled from, but that it is a danger that can be effectively overcome. Even if this were not true, it remains a fact that the policy of selfishness and inhumanity, pursued to the end, rarely if ever proves to be for the general welfare of those who follow it." Dr. George M. Gould, in *American Médicine,* of November 30, says in the leading editorial entitled "The Deportation of Consumptive Immigrants": "We think professional and lay opinion will not justify the exclusion of tuberculous immigrants on the simple ground that the disease is 'contagious' or "communicable.' It is only so in such a low degree that the severe measure of exclusion for this reason alone seems unjustifiable." Dr. George H. Simmons, editor of *The Journal A. M. A.,* in criticising the indiscriminate exclusion, says: "Even hopeless consumptives may sometimes bring some good," and cites Robert Louis Stevenson as an example.

The government decision to classify pulmonary tuberculosis as a dangerously contagious disease has only been in operation a few months, but it has already had its consequences by increasing the fear of people to associate with consumptives. Healthy employes have been discharged because some one of their near relatives with whom they were living were reported to their employer to be suffering from consumption. I have learned of numerous similar cases and very recently two came under my personal observation. A sewing woman who had been employed frequently by a wealthy family mentioned incidentally that her sister was being treated for tuberculosis of the lungs, but was getting along very nicely. The result was that the poor woman was discharged and never employed again by the same family. A similar case happened within this week with a poor washwoman. How much suffering and hardship may thus be daily created only those who come in contact with the poor consumptives can appreciate. All physicians will approve of earnest and intelligent measures to prevent the spread of tuberculosis, but to exaggerate the danger by declaring consumption, which is a chronic, preventable, curable and only a communicable affliction, to be a dangerously contagious malady, we only create another disease in the minds of the people which may justly be called phthisiophobia.

By excluding pauper immigrants, whether tuberculous or not, the immigration authorities do their duty, and every loyal American citizen must approve of it; but by excluding consumptive aliens of means, or at least such who can give evidence that they will not become a burden to the community, we may subject ourselves to retaliatory measures on the part of other governments and wealthy American pulmonary invalids may no longer be allowed to enjoy the hospitality of foreign health resorts. Thus this case has an international as well as a national aspect.

Concerning the humanitarian view of the case I have to add but little to the expressions of Professor Briggs and Drs. Foster and Simmons. Since the ruling of the Secretary of the Treasury that pulmonary tuberculosis is a dangerous contagious disease within the meaning of the statute, all certified cases of tuberculosis are returned without discrimination. Parents may thus be separated from their children, brother from brother, sister from sister, friend from friend, because of a law founded on an unscientific basis, contrary to all sociological interests of our own country, derogatory to our interests and in our relation to other countries, contrary to the American spirit of justice and humanity.

Have those who by this decision stamped every American consumptive as one afflicted with a dangerous contagious disease ever thought how really few families there are who have not at least one, more or less, near relative or friend who is a consumptive? Tuberculosis is the most frequent of all diseases and it is most prevalent in its pulmonary form. It is a disease of the young and the old, the poor and the rich, the East and the West, the North and the South.

May the wise judges of the Supreme Court, who it is to be hoped will soon be called to consider this matter, view it in all its aspects and decide it in the light of our present knowledge which makes the consumptive not a hopelessly ill individual, afflicted with a dangerously contagious disease, whose contact we have to fear, but which declares him only suffering from a communicable and at the same time easily preventable, and in many instances very curable disease.—Jour. A. M. A.

Various Phases of Ascites and Their Treatment.

By A. R. Leonard, M. D. Philadelphia.

I will describe a patient suffering from this condition and use him as a text for some illustrative remarks. The patient is 25 years of age, an Italian, laborer, came under my care on account of vomiting and abdominal pain, swelling in the abdomen, dyspnea, and diarrhœa, which make quite a group of significant symptoms. His family history is negative, but his previous medical history is as follows: He had jaundice at one time, also chorea and syphilis, and has been accustomed to the use of alcohol. The attack of jaundice improved but gastric symptoms continued, and two weeks before seeing me the abdomen began to swell. On physical examination I found the patient suffering from emaciation, but with no eruptions, no edema, and no nodes in the bones, a few enlarged glands in the groin, palpable, but in no other part of the body; his skin is dry and scaly, especially in the extremities. He has a light yellowish tint in the eye, but his heart and lungs are negative, the apex impulse is raised in the fourth interspace. In the mid-clavicular line the resonance is impaired in the fourth and fifth; formerly on lying down it began in the sixth interspace, and extended to the seventh interspace or below that. There is a marked tympany over the margin line of the ribs; upwards for one inch there is an impaired note in the fourth interspace; in the axillary region dullness is from the ninth rib, which is the margin. The left lobe, however, was palpable and heard in the median line; in the depth over the liver is a hard mass in the median line and extending as far as the peristernal line. The swelling in the abdomen shows ascites. The spleen could not be felt, not being palpable, but upon percussion it extends over a large area. His urine contained traces of albumen and at one time a few hyaline casts. There has been in the last ten days a temperature above 100, and hyaline casts from time to time, and recently there was bile in the urine. Hemoglobin, 65; red cells, 4,000,000; leucocytes, 8,500, apparently associated with the hardening of that organ, that is the liver, corresponding to the physical characteristics of the disease. The physical signs due to cirrhosis are vomiting, nausea, ascites, enlarged veins in the abdomen, and the occurrence of hemorrhoids, and from time to time attacks of diarrhœa.

Treatment of the Ascites: First, there is the actual treatment of the cirrhosis of the liver; there is, unfortunately, no specific for the treatment of cirrhosis; there are no specific remedial measures, unless we can determine that this cirrhosis is a specific. This is possible, and in view of this we will hold in mind that the only line of treatment that is specific is based upon the diagnosis. Second, the treatment which is based upon the morbid process. We can arrest that process apparently, and act on the probability that nature may develop the collateral circulation and overcome some of the symptoms, but as a process, there is no doubt that it can be modified. The treatment based upon the morbid process is that which would establish the collateral circulation, which is done by stitching the omentum to the abdominal wall by which means the embarrassed circulation will be relieved. Third, treatment of the symptoms: these are found to be abdominal pain, distension, dyspnea, and the gastro-intestinal symptoms and the enlargement of the spleen. The pain is apparently due to some cause such as distention, and both the pain and distension are due to the ascites; hence this is the first symptom to treat. Of the medicinal treatment I will speak later. As to the operative treatment, first, the patient must be properly prepared for the operation, which consists usually of aspirating with the ordinary trocar and canula. The indications for aspirating is the fact that the patient is suffering from dyspnea, distension, a displaced heart, which embarrasses its action. This one indication should be met by repeated removal of the fluid. The next indication is that the cure of the ascites may be brought about. If the fluid has been removed, and if it fill up again repeat the operation, if the ascites returns and so on until the formation of the fluid has ceased. Here we may be encouraged by the facts based upon the reports of some few cases where the operation has been performed 120 times, and finally without the return of fluid. This man has albuminuria and hyaline casts, the appetite is interfered with and the digestion is modified. Hence it is proper to attempt to cure it, and to tap frequently in order that we may bring this about, and if it is done carefully, I have never seen any reason why it cannot be cured; it does not seem to be much of a drain upon the system.

The third indication is for diagnostic purposes, and we must therefore study the character of the fluid, to determine if possible the nature of the process which caused it; that is to say, the chemical characteristics will show whether there is a transudation or an exudation. If transudation, it is due to cirrhosis of the liver; if exudation, it is due to the ascites. Chronic peritonitis may be present, and other growths of various kinds, in uterine and ovarian disease, which is quite commonly confounded with ascites. So that tapping has its advantages, and we ought not to be careless in the point of diagnosis between ovarian cysts and ascites.

The rapidity with which the abdomen fills depends upon whether the ascites is due to ordinary cirrhosis, or due to obstruction of the radicles only or the trunk of the portal vein. If the latter, then the ascites fills up immediately after the operation. In 24 hours we have the abdomen filled up again by the fluid; when the liver, the ascites fills up slower.

The field of operation has been prepared, the operator has selected the instruments, and the patient is to be made as comfortable as possible by the use of anesthesia, as the chloride of ethyl spray, which is thrown on the skin, producing local anesthesia. After the anesthesia is properly effected, catheterize the patient, to see if his bladder is empty. This patient has been aspirated before, and is somewhat of a soldier in the matter. There are one or two points of interest that may occur in the operation. We get the patient in the proper position, which can be done by laying him down; give him a little ether, also some whiskey. When the treatment takes place, the peritoneum will slip ahead, and will not catch the instrument. After the fluid is removed, the intestines float down and drop against the trocar. I have never seen an accident occur from operation in ordinary ascites. I have once been unable to aspirate because of that condition of the peritoneum; we had to do laparotomy in order to relieve the patient. It is sometimes difficult to get the point of aspiration, especially when the abdominal walls are relaxed so that it is quite difficult to decide where to aspirate. In the case of a woman, we could not peel away the muscular portion of the abdomen, which was dense and flabby. Often there appeared to be a cyst very dense and hard.

There is the question of removing all the fluid. After the first operation it may be well not to do it. The way to get all the fluid is the position in which the patient is placed; then use pressure on the abdomen, gently by means of a bandage, as you see we have drawn around this patient. This fluid is characteristic; it is a straw colored serum. After the second operation was completed, we explored the liver. The specific gravity of the liquid is 1010; 320 ounces was removed before, and apparently there were leucocytes in the fluid on microscopic examination. This will probably yield the same specific gravity, and the percentage of albumen which we will find by the albumenometer. The pulse is steady, and not at all interfered with by the removal of the fluid. By sitting up, and getting the instrument down into the fluid, we will get more of it out.

Diagnostic purposes: There was a case of carcinoma in which we used a very large canula, when we not only got the fluid, but also some scraps of tissue, which showed under the microscope that there was a mass of carcinoma. So that in the diagnosis of malignant disease, aspiration is useful. The point of puncture is sealed by colodion; heat is usually necessary, and have the collodion sterilized. It seals the puncture usually, but not in all instances. Often the fluid will run out of the opening and it is fortunate in these cases, as they turn out pretty well. Six hours afterwards or twelve hours the fluid is running through the punctured wound. We feel sure that the result will be very satisfactory. Nature sometimes performs this operation for us, and when she does that, we get a cure of the ascites, too. Now the intestines are not left up there. The smallest amount of dullness can be found there. Now here you see the linea acanthus, from the rupture of the muscular fibers. Now we will let the patient lie down. We felt the lobe of the liver the other day (the apex of the heart is fallen down.We felt the left lobe of the liver the come so distended by the fluid; the liver is not as palpable now. Last week we could feel it very plainly; it was a little tender, too. Either that or this has occurred. Percussing, there is dullness there in this area, evidently due to compression. I was going to say that possibly the liver is probably adherent to the diaphragm. The liver is compact. The big amount of fluid is that which congests. There is a small area of liver dullness, which is likely to deceive you.

The Medicinal Treatment of Ascites: It is not proper to aspirate every case of ascites, and we must first postpone aspirating in any case until remedial measures are first employed, thereby often avoiding the use of aspiration. Then use remedial measures to control the fluid. The remedies employed are those which simply carry off the fluid; those which act upon the heart and upon the kidneys and skin. Those remedies which act upon the skin are not of much service. Remedies such as hot air baths and jaborandi are indicated for inflammations which are local or due to local causes. When the ascites is due to other causes, as to the liver or to peritonitis or some other process, such measures are not of much use. Remedies which act upon the heart, and those which act upon the kidneys are of advantage; also those which act upon the bowels. Those drugs which keep up the strength of the heart, and stimulate its action, and those which have a combining effect, as digitalis, strophanthus and caffein, are good heart remedies, to reduce the fluid of ascites. They alone may be sufficient. There may be an indication that the kidneys are not active, and then we need a little more diaphoretic action than the drugs I mentioned, as caffein; the alkalies, salts of potassium, citrate or the bitrate, are good diuretics; cream of tartar lemonade acts well as a diuretic, and is probably a mild laxative, too. It certainly increases the action of the kidneys. Another is small doses of calomel; others are those which apparently stimulate the activity of the kidneys directly, as oleo resin of copaiba, which is an excellent diuretic; ten minims, four times daily, will produce an increased flow of urine. Then another diuretic is the Canadian hemp, in the form of the tincture, which is used a great deal in different parts of the country, by very able physicians, for its diuretic property and its remedial effect upon the ascites. In the treatment of this condition we have to be careful of the dosage. Begin with five minims, four times daily; then 10, then 20 minims; in the last named dose it acts as an intestinal irritant, it purges; moderate amount is all right; when too much is given, bad results are apt to follow, causing colitis, which is certainly not an advantage in cirrhosis of the liver. These diuretics are the best that I know of; digitalis, 1/4 gr., calomel, 1/8 to 1 1/4 grs. in blue mass, squill, 1/4 gr. is an excellent combination. The infusion of scoparius is a great diuretic, and is given sometimes with the salts of potassium, and acts very well for a time. It is known as broom tea, it is a home preparation and people have been cured of ascites by its use when doctors had given them up. Purgatives should be given judiciously; the tendency is to constipation in these cases; but while you see the morbid process going on in the liver is such as to reduce the amount you do not want to use such measures as will reduce it further. Use possibly sodium or the salts of magnesia, so as to move the bowels two or three times in the 24 hours.

An important clinical point is, do not think that because there is tympany, the liver dullness is abolished. This is a dictum frequently laid down by clinicians. If you find liver dullness abolished, that is a sign of perforation.—Med. Herald.

Choledochotomy.*

By I. S. STONE, M. D., WASHINGTON. D. C.

The operation known as "choledochotomy" is still in its infancy. It was proposed by Langenbuch in 1884; Parkes spoke of it in 1885; Kummel claims to have performed it in 1884, with fatal result; Courvoisier successfully performed it January 22, 1890. His second operation, February 8th, same year; both of these done successfully. Tait had learned to crush these stones in the duct by means of padded forceps, but he confined his surgical efforts chiefly to work upon the gall bladder and cystic duct.

In this country, Fenger's paper was the first to attract attention, and he succeeded in taking and holding the lead by his persistent effort to perfect the operation. Mayo Robson, of England, is also famous for his success, and more recently Kehr has a wonderfully good record of 6.6 per cent only of mortality, while the mortality from all sources is yet high—namely, 37 per cent.

Case.—Mrs. J., age 30, white, in good health, 160 pounds, weight when seen 110 pounds. Referred by Dr. Koones. Had previous ill health, including several abortions. Had been in hospital in this city in July, 1901, for jaundice and Bright's disease (acute).

Present History.—Has had jaundice for six months; gastric symptoms, persistent nausea and vomiting. Attacks of jaundice not accompanied by pain, and no stones ever found in stools. Do not know how much care taken to find them.

Operation set for December 11, 1901.

Patient etherized and placed in reversed Trendelenburg position. Incision downward five inches outside the rectus. Intestinal adhesions to surface of liver and gall bladder were gradually separated without much bleeding. The stomach and duodenum pushed to left and kept in position by large sponges and assistant's hands. When the large bowel (transverse colon) was separated from the liver, it carried away a portion of the gall bladder, which was necrotic, revealing two stones, as here shown. The gall bladder was firmly contracted around one of the stones, with a small quantity of pus present, which was confined to that locality entirely. One of the stones was in the cystic duct at its upper or outer end, and later in the operation a probe was passed into the duct showing the absence of other stones. The duct was friable like the gall bladder, and was badly lacerated by the manipulations necessary in the operation.

A good deal of time was spent in separating adhesions and in clearing the cystic duct, and in the examination of the hilum of the liver. But we were not satisfied with what was done thus far, although the amount of work done was far in excess of that usually required in cholelithotomy.

The jaundice was not due to the stones already found, and we made the necessary search for further obstruction, feeling somewhat divided in our opinion as to the best course to pursue, fearing the possibility of malignancy.

Finding it always difficult to locate the common duct in the operations formerly done for gall stones, we now located its lower end by following the duodenum down from the stomach until we were about or near the point, half its length, where the duct should enter, and then, with the index finger of left hand in the foramen of Winslow, and lifting the hepatico-duodenal ligament, the course of the duct was pretty clearly outlined and a stone was located about two inches and a half from the hilum of the liver, and nearer the liver than the duodenum. It is worthy of note that without finding the lower end of the duct (approximately), and then without finding a stone in the duct, its exact course would have been difficult to ascertain. We should have been obliged, as in former cases, to have said we don't find a stone, and proceed to finish the operation as best we might under the circumstances. But here we had the proof of the presence of a stone in the common duct. (I did not know at first that two were present.) The pulsations of the hepatic artery on the index finger were distinct, and although I could not see it, I knew the portal vein was very close, and that any injury to either vessel would probably be fatal. After repeated attempts to press the stone upwards into the hilum, where I could reach it with forceps, and also failing to crush it with fingers after the manner of Mayo Robson, or Tait, it was necessary to open the common duct and remove it.

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*Read before the Medical Society of the District of Columbia, January 8, 1902.

It was not easy to hold the stone and duct still, while incision was made for extraction. An enlarged gland was first mistaken for the stone, and was pushed aside, and the duct opened between two catgut sutures, which were inserted that the duct might be held in view while other sutures were placed. The first stone located was easily extracted, and the second found below the opening and forced upward from about 1½ inches above the duodenum. It was the largest of the lot, if my memory is not at fault. I did not find the duct so largely dilated, nor did I have the difficulty in extracting the stones that I thought possible from what Fenger and others had written. I do not think exploration with the finger was possible in this case, either above or below the site of the calculi removed. I was content to use a uterine sound, and while we are told that calculi are easily overlooked, hiding, as they do, in the ampula of Vater, I succeeded in effecting complete removal of the obstruction. The condition of the patient near the end of operation was not very satisfactory, and I confess to having felt some apprehension about the patency of the duct. However, these moments of anxiety will be ever felt by the surgeon in such cases until time removes all doubt. The absence of bile in the stools for the previous six months was not promptly overcome by the operation. Nearly two weeks passed without this desirable result having been announced. The closure of the duct with catgut did not occupy a great length of time, and many sutures were not placed for the reason that we did not care to prevent escape of bile if by so doing the duct might be too tightly closed. The remaining work of placing tubes and gauze drainage did not require much time.

A word about the conditions of the gall bladder. As formerly mentioned, it was torn away from the liver, being adherent to the colon. We hesitated to remove all of the bladder from the bowel, for there was an ugly-looking necrotic appearance, which gave promise of rupture of the bowels at this point, hence we were obliged to leave a part of it attached, and as no perforation occurred, think it was a proper thing to do. The drainage was placed as follows: One rubber tube down to site of the incision in the common duct, in front of the hepatico-duodenal ligament. The other was placed below the site of the gall bladder behind the transverse colon, nearly reaching the foramen of Winslow. Some surgeons have made counter openings to provide for such drainage posteriorly, but we did not think it necessary, and the result proves our course was the correct one. A discharge of thick, viscid bile appeared when the first stone was removed from the common duct, but we did not observe this when the cystic duct or hilum was sounded. The amount which escaped from the common duct was probably ʒij. But we were pleased to notice a very free discharge of bile through the lower tube, which was placed below the cystic duct; the dressings being well saturated at each twice daily dressing. The upper tube over the common duct began discharging on the fifth day, and we thought the sutures had torn out. This discharge ceased after about six days, and soon after this the tube was removed. The patient had casts in her urine until she had nearly recovered. Bile disappeared from urine about one week after operation.

After the drainage tubes were removed the patient rapidly recovered, and now, January 18th, is about to leave the hospital, apparently well, save a small opening in the wound, the site of the drain tract, which discharges a few drops of thin, watery mucus daily.

As noted above, nearly two weeks passed before we were satisfied that the stools contained bile. But this was easily explained by the very free vent given the current of bile when the gall bladder was removed, and the cystic duct practically torn away. When this was closed in by the healing process, the bile found its way readily into its proper channel. The patient made a very rapid recovery after bile appeared in the stools. Her appetite is enormous, and she is gaining flesh rapidly.—Va. Med. S. M.

Carbolic Acid In Tetanus.

By J. E Musgrave. M. D., Handley, W. Va.
Member of International Association of Railway Surgeons.

The treatment of tetanus by hypodermic injections of carbolic acid ranks with that of antitoxin in diptheria. It transposes the very high percentage of mortality to that of recovery. It places a horrible, agonizing and fatal disease promptly under control. In view of the recent epidemic of tetanus in St. Louis, Mo., and Camden, N. J., I think it opportune to add one case to the thirty-four cases on record treated successfully by this method, which was originated by Baccelli, the Italian clinician.

Laborer, white, was working in a barnyard—the ideal place for tetanic germs—and stepped on a nail. This was at 1 p. m. Wound, 1½ inches deep, was swabbed out with 95 per cent carbolic acid at 7 p. m. On third day some pus came out. Wound seemed to close, and on fifth day a little pledget of shoe sole was carried out in pus. The wound then healed. Patient worked a week, then began to complain of soreness in back, neck, and stiffness in jaws. At 3 a. m. of the third day of these slight symptoms, I found him in tetanic rigidity, muscles as hard as a bronze statue. Gave first ¼ grain of morphine hypodermically to relax rigidity of muscles, which was very painful, and subsequently used morphine when indicated. I began at once to give 1.2 grain of carbolic acid in a 2 per cent solution every four hours, or 7.2 grains daily, hypodermically. The rigidity in general was lessened on the third day, but a few sharp exacerbations returned once daily. The treatment was kept up for two weeks without even cloudiness of urine or a single untoward symptom (a few injections being missed in last week), until the patient had not the slightest symptom of lockjaw, and was able to walk about.

The rigidity was excited by a noise, light, touch or draught of air; sweating was profuse when pain was severe. No temperature. Rigidity in abdominal muscles was more persistent than other parts; it had the sensation of a girdle about waist. Nausea and vomiting from acute indigestion. Diet: Milk, oyster soup and crackers. Treatment is reliable, costs little and is always at hand.—Merck's Archives.

A New Method of Anchoring the Kidney.

By BYRON B. DAVIS, M. D., Omaha Neb.

All methods of anchoring the kidney sometimes fail. The ideal operation for fixation is therefore yet to be found. Hence experimentation with various plans is still necessary. The technic herein advocated can best be understood from the following case report:

A. J., an unmarried female, age twenty-one years, had frequent gastric crises and a distressing amount of constant lumbar pain on the right side, especially. She had lost twenty-five pounds in weight during the last year, and was very anxious for relief. On examination the right kidney was found freely movable, falling so low that the upper pole could be felt on bimanual examination. The left kidney was also somewhat movable.

Patient entered hospital November 9, 1901, for operation on right side.

The incision extended from the lower rib to near the crest of the ilium, a hand's breadth to the right of the spinous processes of the vertebra. The fatty capsule was reached just anterior to the outer border of the quadratus lumborum, was opened, and a large part taken away. The kidney was pushed into place by a pad placed under the abdomen. When the kidney was well exposed, an incision was made through the proper capsule, from one process below the upper pole to a point two centimeters above the lower pole. This incision was placed vertically on the posterior surface on the convex border. The capsule was stripped loose from the kidney substance for a distance of at least three-quarters of an inch anteriorly and posteriorly to the incision of the capsule. From the upper and lower extremities to the vertical incision a perpendicular incision two-thirds of an inch long was made through the capsule, thus giving two flaps of the capsule three-quarters of an inch wide by about two and one-half inches long. Next, a strip, the thickness of one's little finger, of the other border of the quadratus-lumborum muscle was split off from the remainder of the muscle, the fibres being separated by the handle of the scalpel. This operation extended from the muscular attachments to the twelfth rib downward for two and one-half inches, or the slit in the muscle was made as long as the length of the capsular flaps before described. Next, an artery forceps was passed through the slit, and the muscle made to grasp the free border of the posterior flap of the kidney capsule and then withdrawn, bringing the flap of the kidney capsule through the slit in the muscle. The two capsular flaps were next brought together over the bundle of muscular fibres, thus isolated from the border of the quadratus lumborum, and stitched together with a running suture of fine chromic catgut, the needle being allowed to penetrate the muscular bundle at two or three places.

The lumbar wound was next closed by tier sutures of catgut, the skin wound being closed with horsehair.

Aside from a slight thin infection the wound did well. The patient was allowed up on the twenty-second day.—Am. Jour. of S. & G.

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*Abtsract of paper read before the Western Surgical and Gynecological Association, Chicago, Devember, 1901.

Medical Miscellany,

THE LOUISIANA PURCHASE EXPOSITION. An advance copy of the Classification Book for the Louisiana Purchase Exposition at St. Louis has been received. Fifty-three pages are required for a mere enumeration of the groups and classes of exhibits. The exhibits of the entire exposition are divided into fifteen departments, as follows: Education, eight groups; art, six groups; liberal arts, thirteen groups; manufactures, thirty-four groups; transportation, six groups; agriculture, twenty-seven groups; horticulture, seven groups; forestry, three groups; mining and metallurgy, five groups; fish and game, five groups; anthropology, four groups; social economy, thirteen groups; physical culture, three groups. The total shows 144 groups and 807 classes, and under each class is a possibility for a multitude of exhibits. Nothing reflects more clearly in so small a space the variety of human occupations or more comprehensively the broad scope of the great exposition which the people of St. Louis are preparing. A place is provided for every conceivable product worthy of exhibition and all nations of the world have been invited to take part. The buildings will have an aggregate floor space of 200 acres and the grounds a total area of 1,000 acres. The money now available aggregates $15,000,000, besides $1,000,000 appropriated by the State of Missouri and various liberal sums from other states. The Classification and the Rules and Regulations of the Exposition will be mailed free on application to the Director of Exhibits, World's Fair, St. Louis.

COMMON LAW RIGHTS ON PHYSICIANS' PRESCRIPTIONS. Jervey in the Chicago Clinic summarizes as follows:

1. The patient has no legal or other right to demand a written prescription or written directions from the physician.

2. It is right and wise that the druggist demand and procure from the physician his written order for the compounding of prescriptions.

3. The physician has the undoubted right to designate what pharmacist shall fill his prescriptions.

4. The written prescription is simply an order from physician to pharmacist. It is, through courtesy and by virtue of custom and convenience, handed to the patient for transmission, but the latter has not, at any time, the slightest right of possession in the instrument.

5. The druggist has at least the right of permanent guardianship (perhaps of outright possession) of the prescription, and he must keep it on file for reference and for any form of proper investigation.

6. There can be no right, extenuation or excuse for a copy of a prescription, with physician's name attached, to be taken by druggist, patient or anyone else without the authority of the physician.

7. The careful physician should invariably retain a carbon paper fac simile copy of every prescription he writes.

8. If a druggist refills a prescription without the order of the physician who wrote it, he does so on his own responsibility, and he has no legal or moral right to leave or place the physician's name on the container.

WHAT SHALL WE DO WITH THE RHEUMATIC FEVER AND ITS COUNTERFEITS. Sir Dyce Duckworth in Phila. M. J., Jan. 4, declares that all forms of arthritis or joint disease are the result of some infection, the only exception being gout. Arthritis which is independent of injury is always of an infective nature. He then speaks of various forms of arthritis: Postinfluenzal arthritis is very clearly infective. Scarlatinal arthritis is generally of a pyæmic character and illustrates a disease due to a mixed infection. Gonorrhœal arthritis is, of course, due to gonococcus. Dysentery is sometimes followed by arthritis. After cerebrospinal meningitis, arthritis which belongs to the pyæmic class may occur. In days gone by puerperal arthritis was seen. As a result of osteomyelitis or acute necrosis of bone, blood poisoning is produced by the distribution in the blood current of streptococci and staphylococci. All of these agencies may give rise to joint disease resembling rheumatism. Gout has often been confounded with rheumatism. In gout the ordinary treatment for rheumatism does not do much, if any, good. The perspiration in rheumatism is known by its rank, sour smell. In pyæmia and pyœmia arthritis, there is a peculiar mawkish sweet odor to the breath which is characteristic of that condition. In typhoid fever, scurvy-rickets, and relapsing fever, there are sometimes pains which may suggest rheumatism. But the greatest number of mistakes are made in the cases of osteo-arthritis. Four out of every five cases of true rheumatic fever are promptly relieved by salicylate-of-sodium treatment. There are a few exceptions to this rule. Osteomyelitis should be treated surgically. It is only the acute cases of osteo-arthritis which are apt to be confused with true rheumatic fever. As to pyæmic, there are almost always rigors, which in rheumatism are extremely rare. The number of joints which are affected should also be remembered and the fugitive character of the pains which pass from one part to another quickly in rheumatism—this will also aid greatly in making the distinction betwen rheumatism and pyæmia—Med. Record.

AMERICAN MEDICAL ASSOCIATION. The Committee on Pathologic Exhibit for the American Medical Association is anxious to secure materials for the coming session at Saratoga, June 10th to 13th inclusive.

This exhibit was accorded much praise and comment during the sessions at Atlantic City and St. Paul respectively where were collected valuable exhibits from all parts of the country. The materials included not only pathologic specimens but the allied fields, bacteriology, haematology, physiology and biology were well represented.

It would also be desirable to secure exhibits of new apparatus, charts, etc., used by teachers of pathology and physiology in medical colleges.

This exhibit has already become a permanent feature of the annual sessions of the American Medical Association and the committee is desirous of securing its list of exhibits as early as possible and to this end asks those having desirable materials to communicate with any member of the committee.

To contribute to the value of the work, it is suggested that as far as possible each contributor select materials illustrative of one classification and by such specialization enhance the usefulness of the display.

Those lending their materials may feel assured that good care will be given their exhibits while in the hands of the committee and due credit will be given in the published reports.

Very respectfully,

F. M. Jeffries, 214 E. 34th St., N. Y. City.

W. A. Evans, 103 State St., Suite 1403, Chicago, Ill.

Roger G. Perkins, West. Res. Med. School, Cleveland, Ohio.

Committee on Pathologic Exhibit, American Medical Association.

INTERNATIONAL CONGRESS OF HYDROLOGY, CLIMATOLOGY, AND GEOLOGY. The sixth international congress will meet at Grenoble, France, in October, 1902.

WESTERN OPHTHALMOLOGIC AND OTO-LARYNGOLOGIC ASSOCIATION. The seventh annual meeting is to be held at Chicago, April 10, 11, and 12, 1902. A very interesting provisional program has been prepared.

THE MILWAUKEE MEDICAL SOCIETY. The following officers have been elected: President, Dr. Frederick G. Shimonek; vice-president, Dr. Carl Zimmermann; second vice-president, Dr. J. W. Coon; secretary, Dr. A. T. Holbrook; treasurer, Dr. U. O. B. Wingate; librarian, Dr. L. F. Frank; curator, Dr. J. M. Boffel; member of committee on membership, Dr. Bryan Smith; member of committee on directory and nurses, Dr. A. P. Patek; members of council, Dr. H. A. Sifton, Dr. H. V. Ogden, Dr. T. H. Hay, Dr. W. H. Washburn, Dr. F. E. Walbridge, and Dr. G. E. Seaman.

THE AMERICAN ASSOCIATION OF UROLOGISTS was organized on February 22, 1902, essentially for the purpose of further development of the study of the urinary organs and their diseases. Although most of the founders of the association are specialists in genito-urinary diseases, membership is not limited to those engaged exclusively in this specialty. Thus gynecologists, who embrace renal and vesical surgery in their work, are among the founders, as are also several gentlemen who devote themselves to the microscopy and chemistry of urine, as well as a number of practitioners interested in the study of the kidney from a medical standpoint. The association consists of active, corresponding and honorary members, and is in great measure modelled upon the plan of the Societé Française d'Urologie, modified to suit American circumstances and conditions. Whenever possible, the branch associations throughout the United States, British possessions and Spanish America, will hold their meetings on the same evenings as does the parent association in New York (the first Wednesday in each month). The work of the association is principally clinical, for the demonstration of new methods in the technique of examination and treatment. The annual meeting of the American Association of Urologists will be held on the last day and the day following the annual meeting of the American Medical Association. The officers of the association are: Ramón Guiteras, M. D., president; Wm. K. Otis, M. D., vice-president; John Van der Poel, M. D., treasurer; Fred C. Valentine, M. D., secretary; A. D. Mabie, M. D., assistant secretary.

U. OF P. ESTABLISHES A NEW SPRING SCHOOL. A matter of no small interest to the medical profession of the eastern, middle and southern states, is the decision on the part of the Medical Department of the University of Pennsylvania to inaugurate, during the coming spring, a series of courses for practitioners of medicine. This movement has been under contemplation for some time and is just now to be consummated. The reasons for and purposes of the spring school are set forth in the last report of the Provost in these words: "The many advantages possessed by a large medical school in promoting and teaching the science and art of medicine, make it desirable that others than undergraduate students should be admitted to its benefits. There exists a body of physicians who, either because their professional lives are spent away from active medical centers or because of original defects in their training, find it difficult or impossible to keep in touch with the progress of medicine. For such of these physicians as may desire to extend, complete, or revive their past training, a graduate course of study would be of great advantage. The medical school possesses, moreover, the equipment needed to supply such instruction. The facilities provided by hospitals are at command throughout the entire year, and those of the laboratories may also be made available."

Courses of instruction will be offered in medical chemistry, anatomy, physiology, bacteriology, pathology, clinical medicine and surgery, gynæcology, opthalmology, otology, dermatology, laryngology, and other specialties. All the courses have been designed to be practical in character and to fit the abilities and purposes of the practitioner of medicine.

Summer schools for post-graduates in medicine are conducted in connection with several other medical schools, but with one or two exceptions the faculties take a minor part in the teaching, this work being left to the junior staff. This fact is significant in view of the prominent part to be taken by the medical faculty of the university in the proposed spring school.

COLLEGE OF PHYSICIANS AND SURGEONS, BALTIMORE. This college has just inaugurated new post-graduate courses, to be open from April 28th to June 9th, this year.

These courses are designed for practitioners of medicine who desire to spend a short time in advanced clinical and laboratory study, and keep in touch with the progress of the day. The clinical courses include all departments of medicine and surgery and are entirely practical, the student making all examinations himself.

EYELIDS FROM SKIN-GRAFTING. Dr. Chas. M. Thomas, of Philadelphia, recently supplied a patient with a new set of eyelids. The patient had lost both the upper and lower eyelids by being enveloped in flames. The accident left the eyeballs unprotected and there was danger of total blindness. Dr. Thomas several months ago began his efforts to create new lids by grafting skin taken from the patient's hip. To-day the patient has four new eyelids, which perform the normal functions naturally. This is the first surgical feat of the kind.

HENNEPIN COUNTY MEDICAL SOCIETY held its first annual banquet at the Commercial Club on the evening of March 3d. It was attended by about 400 members, including Drs. J. B .Herrick and A. J. Ochner, of Chicago.

Dr. H. L. Staples was toastmaster and there were speeches by Drs. W. A. Hall and W. A. Jones. The features of the evening were the papers read by the Chicago physicians. The subject of Dr. Herrick was "Endocarditis," and that of Dr. Ochner, "Observations in Gall Surgery."

DEATH OF DR. R. E. CUTTS. The medical profession of this city and the northwest were shocked to learn on the 19th of last month that R. E. Cutts, M. D., the well known physician of Minneapolis, expired quite suddenly at 1 o'clock of that day. He was found apparently asleep in his buggy on his return from a tedious operation, and a few moments later he breathed his last.

Dr. Cutts, although but 35 years old, had already reached an eminence in the profession beyond the usual lot of men.

He was a graduate of both the academic and medical departments of the University of Minnesota as B. S. and M. D., and for a year following was interne at St. Barnabas hospital. He has since frequently visited New York for the after part of his education. His specialty was obstetrical surgery, in which department he was a recognized authority. He was born in Litchfield, Minn., and leaves his wife and child, his mother and several sisters and brothers, one of the latter a physician at Grove City.

CROW RIVER VALLEY MEDICAL SOCIETY will hold its next meeting at Willmar, April 9th, 1902. The June meeting will be held at Minneapolis, and the August meeting will be held at Lake Koronis. It is the desire of the society to make these meetings thoroughly interesting to all of the members. Therefore, papers, reports of cases, pathological specimens, etc., are requested.

The following papers have already been promised: "One Hundred Operations under Cocaine Anesthesia," by Dr. Robertson, of Litchfield. A series of papers on obstetrics will be read. Dr. Archibald, of Atwater, heads the list. "How our Patients Should be Handled Before, During and After Labor." Dr. Chapman, of Litchfield, will read a paper on "Forceps Delivery." Dr. Sherwood, of Kimball, "Puerperal Septicemia." Dr. Morell, of Litchfield, "Puerperal Eclampsia." Dr. Custer Cutts, of Grove City, "Post-partum Hemorrhages." Dr. Robertson, of Litchfield, will read a paper on the "Operations Subsequent to Pregnancy," as Tubal Pregnancy, Symphysiotomy, Porro's Operation, Laceration of Cervix, Laceration of Perineum, Vesico Vaginal Fistula and Ventro-fixation. Papers on any subject connected with obstetrics by members of the society will be greatly appreciated. Our society now has fifty-three members and it is desired that we have a membership ot sixty before the annual meeting which takes place in June.

Another notice of the meeting will be sent out later.

JAMES W. ROBERTSON, Sc'y.

TREATMENT OF PNEUMONIA. Dr. Edmund D. C. Cheseboro, Providence, R. I., Providence Medical Journal, concludes a paper as follows:

In a disease so varied in its manifestatoins and symptomatology, occurring as it does at all ages and among all sorts and conditions of men, it is impossible to formulate a routine method of treatment which will apply to all cases. To summarize the outline of the treatment as here presented, however, I would lay special stress upon the importance of the following procedures:

1. Place the patient under the most favorable hygienic conditions with special reference to ventilation.
2. Carefully regulate the diet, guarding against constipation, and insisting upon the liberal use of pure, cold water.
3. Early in the course of the disease employ counter irritants, particularly in the broncho-pneumonia of children.
4. Relieve distressing cough by inhalations and, if necessary, by the use of opium or its derivatives.
5. Relieve pleuritic pain by the intermittent use of hot or ice poultices or by the subcutaneous use of morphia.
6. Reduce temperature, if necessary, by bathing.
7. Stimulate heart with strychnine and in selected cases with alcohol, digitalis, and normal salt solution. It is possible that venesection, which may be followed immediately by the injection of normal salt solution, is indicated in certain cases of engorged right heart and if boldly done may be instrumental in saving life.
8. Employ large and frequently re-

peated doses of antipneumococcic serum in desperate cases, particularly in those with a tendency to extension of the inflammatory process.

A NEW FRUIT. There is every reason to suppose that before long a most delicious fruit, new to America, will dominate our markets; already a few specimens have found their way to the seaboard cities, says the Southern Clinic. This is the mangosteen—native to the Moluccas and extensively cultivated in Ceylon and Java, and latterly introduced in Jamaica and other parts of the British West Indies. It is about the size of a small orange, spherical in form, and when the rind is removed a juicy pulp, "white and soluble as snow," is revealed, possessing a most delicious flavor—something like a nectarine, with a dash of strawberry and pineapple combined. It promises, in a few years, to supersede the orange in popular favor, and attempts are already being made to introduce it into the southern United States.

THE DOCTOR WHEN HE'S SICK.

I have patched the voice of singers,
And have robbed the sneeze from grippe,
Knocked the chills clear out of ague,
Cured the smallpox every trip.
But one stunt has always floored me,
Always will,—this little trick,—
Giving pills and soft emulsions
To the doctor when he's sick.
—G. T. P., Chicago Clinic.

MEDICAL JOURNALS IN AMERICA. America can now boast of seven great weeklies, 260 monthlies, and some 25 other journals of various kinds. New journals born within the year are: American Medicine, of Philadelphia; Detroit Medical Journal, Detroit, Mich.; Texas Medical Gazette, Fort Worth, Tex.; Journal of New York Medical Association, Albany; Journal of Surgical Technology, New York City; Doctor's Magazine, Alma, Mich.; Regular Medical Visitor, St. Louis, Mo.—Am. Med. Journalist.

TREATMENT OF INFANTILE DIARRHEA. Wm. H. Robey, Jr. (Phil. Med. Jour., July 27, 1901) says the treatment is obviously:

1. To cleanse the bowel of the bacteria and their toxic products.
2. To give the remaining bacteria as unfavorable conditions as possible for further production.
3. To soothe the irritated intestine where the continuance of the condition makes this necessary.
4. To support the patient against constitutional symptoms, as fever, nervous irritability, etc., as in other acute diseases of childhood.
5. To guard against infection of others by isolation when possible and by carefully washing the hands after handling the stools in order not to infect other food and common household articles.

Naturally the small intestine must be cleansed by a purge, and for this purpose, calomel 1 gr., was given in 1-10 gr. doses at ½ hour intervals. It has been asked why castor oil was not given since it has such soothing properties. In treating infantile diarrhea, especially in dispensary practice, one must try to accomplish as much as possible at the first visit, for obvious reasons. The gastro-intestinal tract of the infant being in an irritable state, the oil is more apt to be vomited; whereas, I have never known this result with calomel; in fact, it will allay vomiting should that dangerous symptom be present. Furthermore, castor oil is such a common household remedy that it may have been tried already, while calomel in divided doses keeps the mother busy and aids her patience in carrying out the second important step in the treatment—starvation.

Each case of diarrhea before leaving the hospital had the bowel washed out by a trained nurse. This was done by passing a large soft rubber catheter into the bowel, allowing the tepid normal salt solution to flow in during the passage, thus dilating the bowel and facilitating the introduction. At least 2 quarts of the salt solution were allowed to run in, the bag of the fountain syringe being held about 3 feet above the table.

The character of the washings from each case was noted and a record made of the reaction, odor, color, presence of curds, fat globules, mucus, blood and membrane. The color and odor may, however, alter in a few hours. The washing was repeated upon as many successive days as the case required; being out-patients, it could not be done oftener—twice daily he thinks sufficient.

As important as cleansing the bowel of the toxic products is to give the gastrointestinal tract more work to do nor the remaining bacteria any more culture media upon which to grow and thus continue the production of toxins. Hence food was withheld for twenty-four hours and albumin water (whites of two eggs added to a pint of boiled water with a pinch of salt and a teaspoonful of brandy) was given—a half teacupful every two hours. Sterile water could be given just as well, but in dispensary practice especially the mother is more ready to carry out this very important part of the treatment if she is giving what she considers to be a food.

It is a good plan to tell mothers going into the country with their children to stop food for twenty-four hours at the very onset of a diarrhea. If there is vomiting the stomach must be washed out as well as the bowel, and this can be done with the same kind of catheter. If the temperature is high and the nervous symptoms marked, a tepid bath will be a valuable addition to the treatment. This was employed in some of the cases before they left the dispensary, but in the majority of our cases the temperature not being high, the desired effect was produced by the enema.

After twenty-four hours the majority of cases require no further medication and depend for continued improvement upon the gradual resumption of food. All cases were put upon a weak modification of sterilized milk, the point being to have the percentages low enough. He did not find it necessary to use dextrinized barley water or other starch foods, the very dilute alkaline milk mixtures being sufficient.

As we have shown at the outset, breast-fed babies seldom have diarrhea, and when they do, are easily returned to the breast after twenty-four hours' starvation, especially if the interval between feedings is increased. Where there was still some irritability of the bowel the subnitrate of bismuth was given in at least 20 gr. doses every three hours. Where bismuth was given immediately without the initial purge the results were unsatisfactory, and in almost every case where it was tried the treatment had to begin over again upon the following day. Opium was used only where pain was a marked symptom, and then only where the stools were frequent, since the danger of opium in stopping peristalsis and thus favoring absorption from the bowel is very well known. The necessity of cleanliness, pure food and fresh air was carefully explained to every mother.

A small number of his cases which showed no improvement after three days were referred to the Boston Floating Hospital, where the required treatment could be carried out under proper atmospheric conditions.—Pediatrics.

UNRECOGNIZED CHANCRE. In the International Medical Magazine for October, William S. Gottheil calls attention to the frequent insignificance and fugacity of the syphilitic initial lesion, which leads to its non-recognition in quite a large proportion of cases. Ignorance of its occurrence, and not voluntary falsification, is the cause of the frequent absence of a syphilitic history in undoubtedly specific cases. The author calls attention to the following points of diagnosis:

1. The presence of a tumor as the original lesion. In its essence, and invariably at the beginning, the chancre is a small, round cell accumulation in the skin or subcutaneous tissue. Ulceration may occur, and usually does, or even phagadenism; but these are accidental, and epiphenomena, and almost invariably the specific induration is appreciable at the base of the lesion.
2. The tumor is indolent, painful and recalcitrant to treatment.
3. A peculiar and characteristic "stony" induration of the nearest lymphatic glands accompanies it, different from the general adenopathy that occurs later as a consequence of the systematic infection. Other lesions, as gummata, do not show it.
4. Chancre runs its full course in a few weeks, whilst tuberculosis takes months, and carcinoma even years, for its development.
5. The well known signs of general luetic infection, osteocopic pain, cephalalgia, synovitis, general lymphadenitis, exanthem, etc., must be carefully and persistently searched for in every suspicious case. They may be so slight as to entirely escape careless examination.

BEAUMONT OIL FOR THE LUNGS. A dispatch to the daily press says: "It is claimed the crude Beaumont oil is a splendid remedy for all bronchical and lung afflctions. Its use is becoming general. The dose is fifteen to twenty drops of oil upon a lump of sugar three times a day. Doctors say it cannot be injurious and believe that it is the sulphur in the oil that gives it its curative properties."

PASSING AWAY. Take a walk through any of the cemeteries throughout the country and you will believe with us that fools are slowly but surely passing away.

With silent tread you pass the last resting-place of the individual who blew into an empty gun.

The modest tombstone of the hired girl who lighted the fire with kerosene, and the grass-carpeted mound that covers the mortal remains of the boy who took a mule by the tail.

The tall monument of the man who didn't know it was loaded overshadows the dug-out of the man who jumped off the cars to save a ten-rod walk.

Side by side lie the remains of the ethereal creature who always kept her corset laced up to the last hole and the intellectual idiot who rode a bicycle nine miles in ten minutes.

Here reposes the young doctor who took a dose of his own medicine, and the old fool who married a young wife.

Right over yonder in the northwest corner, where the gentle breezes sigh through the weeping willow that bends over his lowly bed, lies the fellow that told his mother-in-law she lied.

Down there in the potter's field, with his feet sticking to rude blasts of winter and blistering rays of summer's sun, is stretched all the earthly remains of the misguided regulator who tried to lick the editor, while the broken bones of the man who wouldn't pay for his paper are piled up in a corner of the fence.

Near by, his grave unmarked, reposes the moldering dust of the printer who starved to death trying to run a first-class paper in a fourth-class town.

Over by the entrance reposes the boy who went swimming too early in the season and the old lady who kept strychnin and baking-powder side by side in the cupboard.

Right there in the path directly in front of the entrance, obstructing the way, is the grave of the microbe-killer who rinsed himself inside and out with antiseptic solutions until his agonies were cut short by acute softening of the brain.

The fool-killer gathers them in, one by one, and by and by we will have a pretty decent world to live in.—Ex.

THE GENESIS OF NEURASTHENIA. The hereditary transmissibility of character and temperament may be considered well established; as man slowly emerged from a primordial, semi-bestial state the pressure of environment and circumstance gradually moulded him into distinctive types. With the development of racial, national and family life certain modes of thought and feeling sprang into being and were transmitted from parent to offspring through the generations, until they became innate in the individual. With the development of life in inclosed cities new conditions of being were created; new tendencies became operative and produced a large proportion of constitutionally weak individuals. Whereas formerly, in the primordial state and in the earlier dawn of civilization, the weak and unfit were allowed to die and disappear without transmitting their defects, the refinement of later civilization formulated and enforced a code of laws and regulations that were intended to preserve the lives of the sickly and the gentle. The average of life was thus artificially raised, the death rate decreased, but the result was a large population of hereditary misfits, living at a low level of health.

From this vast congregation are recruited the "malades imaginaries," the hysterics, and the neurasthenics. The sufferings of these unfortunates are real; the functions of their brain are changed by some obscure but nevertheless material condition. There is a lack of coordination in actions and sensations; each part of the body, instead of performing its apportioned share of labor and at the same time contributing its portion to the maintenance of the organism, apparently disassociates itself from the whole and rebels against control and authority. The central cerebral autonomy is disturbed.

How to cure these patients, how to help them regain control of normal mental operations, how to lead them back to natural and healthful paths of thought and feeling!

The somatic phenomena of the disease, the metabolic disturbances that accompany, possibly precede, the cry of the body and the soul for control, may generally be regulated by physical means, drugs, hydrotherapy, electricity, rest in some cases, exercise in others. And much can often be accomplished by psychical means.

The physician must enter with sympathy into the sufferer's affliction; he must discover a spark of normal interest here and there and fan it into life; he must forbid his patient to worry about himself and must teach him not to entertain theories about his condition. Above all, he must aid him and encourage him to help himself.

In the neurasthenic, finally, the healthy fatigue-sense is lost and must be controlled—"he is reduced to beggary in a neurotic sense and restoration to solvency depends not upon medicinal alms but upon furnishing a provident neurine 'woodyard' in which he can work out his own salvation."—Int. Med. Mag.

ANESTHESIA. Much can be said about anesthetics and anethetists pro and con. It is absolutely criminal to allow a "tyro" to administer the anesthetic. Some allow first course students or office assistants to do this and are oftentimes. at a loss to know why the patient takes the anesthetic badly, or worse, why the patient dies. No one should given an anesthetic who is not a well grounded physician and fully able to meet any and all emergencies. I am convinced that this should be a "specialty" in medicine. If this could be and scientific administration should be the rule and not the exception, there would be few accidents to chronicle. Again, the right preparation of the patient is almost a "sine qua non" to its success. If possible, the alimentary canal should be emptied the previous night and no food should be given for several hours before the administration of the anesthetic. Careful examination should be made for diseases of the heart and kidneys and perhaps lung complications. The head should be low and no interference with the respiratory movements should be allowed. Clothing must be loose and false teeth, etc., removed. Everything necessary should be at the hand of the anesthetist; strychnin in the hypodermatic syringe, a larger one containing brandy or whisky, and dilute hydrocyanic acid. This latter is regarded as the best antidote to chloroform narcosis; it must be given in full doses on the back of the tongue by means of a drop tube.

It is wise to give, shortly before the administration of the anesthetic, one-fourth grain of morphine and 1-100 grain of atropine hypodermatically; it has a marked tendency to lessen the struggles, produces a calminative effect and also acts as a synergist, consequently less of the anesthetic is required and its action is prolonged. Do not forget to apply some mild urguent to the nose and lips to prevent burning, and instruct the patient to close the eyes. The patient's condition may continually change, therefore the anesthetist must be on the lookout all the time, watching the pulse as well as the respiration. He has nothing to do with the operation, as far as he is concerned he ought to know nothing about it. I am absolutely and unqualifiedly in favor of chloroform, therefore I prefer the inhaler called Esmarch's with its dropper; it is a safe apparatus and convenient. The tongue may drop back and interfere with breathing, this is indicated by noise. You must push the jaw forward and draw out the tongue. This can be done with the tenaculum or with forceps. The rythmic drawing out of the tongue is a superb way to perform artificial respiration. If the patient has stertor, cold and clammy skin, with pallor, pupils widely dilated, pulse slow and weak, resort to strychnia, dilute hydrocyanic acid, artificital respiration and Nelatons position. —V. W. G. in K. C. Med. Index-Lancet.

A DREAM. Time, 1925; Company, "The Amalgamated Only of America;" Scene, the waiting room of the Exclusive General Agent. The company no longer goes to the man, the man must come to the company. The room is crowded and people waiting outside in a long line to get in.

The General Agent sits in a raised chair in his private room with his back to the light and scans closely every eager applicant as he comes in his turn before him. If satisfied by this inspection, the applicant pays him a bonus for the compliment and he is at once ushered into the Medical Department for examination. Here an accurate description, according to the Bertillon system, is taken of the man and he is then photographed, skiographed, sphygmographed and hemocytographed; stethoscoped, phonendoscoped, ophthalmoscoped, auriscoped, urethroscoped, rectoscoped and microscoped. If, happily, hep asses successfully through all these tests, he is dismissed from the Medical Department feeling as though he had been telescoped, and told to await further instructions.

At the end of a week, perhaps, he receives notice to appear before the Board of Final Approval. Here he is told that his whole life from birth to the present moment is well known to the board; that it is satisfied with the medical and inspection reports and will issue him a gilt-edged, steel-bound, non-forfeitable, go-where-you-please and die-when-you-like contract.—Med. Examiner.

THE USE OF BONE CHIPS IN OSSEOUS CAVITIES. A common method of treatment of cavities in bone, especially those resulting from necrosis, is, after removing the sequestrum and scraping away the diseased tissue down to healthy bone, to pack the cavity with iodoform gauze. In time granulation tissue gradually fills up the defect in the bone, requiring, therefore, less and less of the gauze until, ultimately, the cavity is entirely filled with new tissue. The great defect in this method is the length of time it takes to bring about a successful result, while occasionally the production of granulation tissue stops short of completely filling the cavity, especially if the latter has been of considerable size. To hasten the process, then, a number of different methods have been employed in place of the gauze packing. Thus, Neuber proposed, after chiselling away the involucrum, to cover the floor and sides of the cavity with flaps of skin raised from the adjoining surfaces of the bone, retaining them there with aseptic nails. Blood clot, gutta percha, formalin gelatin, have been tried, the object being to fill the cavity, thus making a frame-work or support for the new granulations. Martin speaks highly of the method of Barth, viz., the use of calcined bone, claiming that it supplies lime salts for the bone forming tissues. Senn employs decalcified bone chips, and as this is the substance we have used for the last five years, we will speak more particularly of it.

The chips are prepared as follows:—Take the shaft of a recently killed ox, saw it in portions two inches in length, remove the marrow and place the fragments of bone in a 15 per cent sol. HCL. Change the solution every twenty-four hours. In from 2 to 4 weeks the bone will be decalcified. Wash in distilled water, place the pieces of decalcified bone in a dilute solution of potash to neutralize the acid and then immerse for twenty-four hours in distilled water. The pieces of bone are now cut into strips ¼ of an inch wide and kept in an alcoholic solution of Hyd. bichlor (1:500). The following are some of the cases in which the bone chips were utilized:

1. K. B., age 12, was seen July, 1896, with a history of disease of the humerus of several years' duration. A number of operations had been performed in which iodoform gauze had been employed but a sinus remained after each one. On operation I stripped back the periosteum, enlarged the cloacae, thoroughly scraped the diseased tissues, packed the cavity with bone chips, and, sprinkling a mixture of boracic acid and iodoform among the layers of the chips, sutured the periosteum over the chips, leaving a few strands of catgut as a subperiosteal drain. In four weeks she left the hospital cured and when seen in May last there had been no trouble with the arm since the operation.

2. Geo. R., age 15, presented a history of a severe inflammation of the humerus, beginning some months previously. On chiselling the bone as above,

a sequestrum of about five inches in length was removed in three portions and the cavity filled with chips. Recovery was uneventful and he left the institution in about five weeks.

3. Addie M., age 18, gave a history of severe boring pain in upper part of right tibia. The bone was slightly enlarged in this situation and a diagnosis of tubercular abscess was made, the walls of which, on operation, were thoroughly curretted and the cavity filled as above —a speedy recovery ensuing.

4. W. S., age 12; necrosis of femur: Bone chips were employed with results equally as good as above.

The chips are more serviceable in necrosis than in caries, since, in the latter the tubercular process generally spreads for some distance into the surrounding bone and hence the asepsis of the bone chips can not be maintained, as a rule; besides it is advisable to have a periosteal covering to the packing, as otherwise an insufficient supply of blood is the result, and in caries this periosteal covering is as a rule unobtainable, though in one case—caries of the femur —I used the chips with a good result in six weeks' time, whereas, in another patient with the same trouble and in as good a state of general health apparently as the former, the defect was not filled until after three months' treatment with the gauze.—D. E. Mundell in Kingston Med. Quar.

Book Notices.

A PRACTICAL MANUAL OF INSANITY for the Medical Student and General Practitioner, by Daniel R. Brower, A. M., M. D., LL. D., professor of nervous and mental diseases in Rush Medical College, in affiliation with the University of Chicago; professor of nervous and mental diseases in the Woman's Medical School of the Northwestern University, and in the post-graduate Medical School of Chicago, and Henry M. Bannister, A. M., M. D., formerly assistant physician, Illinois Eastern Hospital for the Insane, Philadelphia and London, by W. B. Saunders & Company, 1902, price $3.00 net.

The above work is a timely publication, and by its simple and practical details concerning the various phases of insanity cannot fail to aid medical students and interest physicians in general. Both authors have had much experience in hospitals for the insane as well as in the treatment of nervous diseases in general practice, and were well equipped for the execution of the work. We miss any extended description and treatment of the specific mental disturbances incident to pregnancy, childbirth, and lactation, and the young practitioner confronted with a case of that kind might be disappointed in consulting the book and be at a loss as to what line of treatment to follow. Under such circumstances he might send patients to hospitals unnecessarily, when home treatment would be successful with proper directions. A chapter on these mental conditions would add much to the interest and value of the publication. We can cheerfully recommend the work both to students and medical practitioners as treating the subjects in a direct and up-to-date manner.

SYPHILIS, a Spmyosium. Special Contributions by L. Duncan Bulkley, A. M., M. D.; Follen Cabot, Jr., M. D.; Louis A. Duhring, M. D.; Prof. Fournier, M. D.; Eugene Fuller, M. D.; E. B. Gleason, M. D.; William S. Gottheil, M. D.; Robert H. Greene, A. M., M. D.; Norman B. Gwyn, M. D.; Orville Horwitz, M. D.; Edward L. Keyes, M. D.; G. Frank Lydston, M. D.; D. J. McCarthy, M. D.; Thomas G. Morton, M. D.; Boardman Reed, M. D.; A. Robin, M. D.; and J. D. Thomas, M. D. New York City: E. B. Treat & Co., 1902. Price, $1.00.

For a concise statement of an important subject the above work is one of the best we have seen in a long time. It is so plainly and pointedly said that the most commonplace practitioner may understand and learn just how to diagnose and treat the disease of syphilis.

MEDICAL DIAL

A Monthly Record of Medicine and Surgery

Published by MEDICAL DIAL COMPANY

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SUBSCRIPTION PRICE

United States, Canada and Mexico, per annum, in advance, - - - - - - - - - - - - - - $1.00
Foreign Countries in the Postal Union, per annum, in advance, - - - - - - - - - - - - - 1.50

N. B. Matter for the reading pages should reach office of publication on the 20th of the proceding month and display advertising on the 25th, to insure attention.

Vol. IV MINNEAPOLIS, MINN., MAY, 1902 No. 5

GOVERNMENTAL CONTROL OF THERAPEUTIC SERUMS, VACCINE, ETC.

In the Public Health Reports, Jan. 17, will be found an account of the four principal European countries concerning the preparation, sale, and distribution of therapeutic serums and other analogous products.

The laws of France are comparatively stringent in regard to the preparation of serum, modified toxins and other products applicable with prophylaxis and treatment of contagious diseases. These products, it is provided, shall not be marketed under an actual or trade name until they shall have been authorized by government according to the judgment of the consulting committee of the Council of Hygiene of France, and the Academy of Medicine. The products are granted a temporary or revocable license only, and are submitted to the inspection of a commission appointed by a minister having competent authority. This is a wise precaution and insures the safety of the public from poor or poisonous material. There are regulations, also, providing for the mode of issue of such products, except animal and humanized virus.

In Germany diphtheria antitoxin is the only one of the serums which is governed by the trade ordinance of the country; but the system for vaccination as preventive of smallpox is nowhere else so thoroughly carried out, and statistics show no other country is so free from the disease.

The government of Italy has the most stringent regulations as to the production and sale of therapeutic serums and the most thorough of any country in the world. It is provided "that no one shall, without consent of the Minister of the Interior, prepare for sale (a) vaccine, (b) virus, (e) therapeutic serums, and (d) toxins, antitoxins and other similar preparations." The conditions for this consent and special instructions in regard to the preparation and the sale are determined by government, after hearings from the Council of Health.

The Russian Commission for the prevention of the introduction of the plague, last May, left the preparation of anti-pest serum with bacteriological institutions which have given the necessary guarantees, on condition that no money shall be paid by the crown to such establishments; that no obstacles shall be placed by the local authorities in the way of the preparation of these serums, and that the serum shall be prepared harmlessly; that is, by means of dead microorganisms of toxins, and not by means of living cultures. That the serum prepared shall be tested before sent from the Imperial Institute of Experimental Medicine, and the commission has the right of disposal to the places where most in need.

There is no mention of any laws in Great Britain on the subject, and Italy is the only country that controls the manufacture and sale of vaccine.

On account of the accidents that have lately occurred in this country from badly prepared toxins, there has been some movement in favor of government control here of such products. A competent commission, such as that of Italy, to examine and license all laboratories manufacturing serums, vaccine and analogous products, and with power to inspect and test the materials, would go far to protect individuals from poisonous preparations, and would be about all the government could be expected to accomplish by any supervisory power. Large firms especially equipped for the manufacture of pure serums and toxins and anti-toxins, should not have to compete, in a financial way, with Boards of Health who may prepare products in a careless, uninspected and untested way for the poor under their charge, for the poor are as deserving of pure virus as the more fortunate class who may be able to pay for treatment.

Dr. J. F. Kline, of Anoka, Minn., will erect a twenty-thousand-dollar sanatorium this summer.

THE AMERICAN LARYNGOLOGICAL, RHINOLGICAL, AND OTOLOGICAL SOCIETY. The eighth annual meeting of the American Laryngological, Rhinological, and Otological Society will be held in the city of Washington, D. C., June 2d, 3d, and 4th.

AMERICAN DERMATOLOGICAL ASSOCIATION. The American Dermatological Association announces its next meeting for September 18, 19, and 20, 1902, at Boston. The subject for general discussion is to be acne vulgaris. The etiology and pathology are to be presented by Dr. Gilchrist, of Baltimore; the symptoms and treatment by Dr. Fox, of New York.

INTERNATIONAL CONGRESS FOR THE PROPHYLAXIS OF SYPHILIS AND VENEREAL DISEASES. The International Conference for the Prophylaxis of Syphilis and Venereal Diseases is to meet in Brussels, Belgium, September 15 to 20, 1902.

THE AMERICAN PEDIATRIC SOCIETY will meet in Boston on May 26th, 27th and 28th. Members of the society who have papers to present are requested to communicate with the President, Dr. W. S. Christopher, or with Drs. Blackader and Rotch, who are in charge of the arrangements for the meeting.

MINNESOTA STATE BOARD OF HEALTH. At a recent meeting the following officers were elected to serve for the ensuing year:

Dr. F. Staples, of Winona, president, and Dr. Henry Hutchinson, St. Paul, vice president, both of whom were reelected. Dr. Bracken holds over for two years more as secretary.

An executive committee was also elected, which consists of the first three officers of the board, who are members ex-officio, and Dr. M. H. Reynolds, of the experimental station at St. Anthony Park, and Dr. Edward Shumpik, Minneapolis, who will serve in that capacity for the ensuing year.

BLUE EARTH COUNTY MEDICAL SOCIETY. To the Editors of the Minneapolis Dial, Minneapolis, Minn. Dear Sirs:—A meeting was called for the reorganization of the Blue Earth County Medical Society along the plans suggested by the committee on the reorganization of the American Medical Society at its last meeting. The organization was perfected and the following were elected officers: President, J. Francis Schefick; first vice president, F. D. Brandenburg; second vice president, John Williams; third vice president, Julian A. Heilscher; treasurer, DeLos D. Smith; secretary, Carl J. Holman. Judicial council, Wm. Frisbie, Madge Timmerman-Holman, and S. D. Sour.

A resolution of approval of the plan of reorganization of the Minnesota Medical Society was passed. The subject of discussion was "Puerperal Fever, Its Prophylaxis and Treatment." After a social hour the meeting adjourned to meet again on the evening of the first Thursday of May, when the following papers will be presented and discussed: Anesthetics in Surgery, F. D. Brandenburg; Anesthetics in Medicine, J. A. Heilscher; The Use of Cocaine and Other Local Anesthetics, D. D. Smith; Intra-spinal Anesthesia, M. T. Holman,

Fraternally yours,
Carl J. Holman, Secretary.
Mankato, Minn., April 17, 1902.

The United Norwegian-Lutheran denomination of Fergus Falls, Minn., will erect a deaconess hospital this year, same to cost about $10,000.

A man in Germany carries a bullet in the right ventricle of his heart.

The Chicago Medical Society celebrated its fiftieth anniversary on the 9th of April. The following are the present officers: Dr. Alexander Hugh Ferguson, first vice president; Dr. Hugh T. Patrick, second vice president; Dr. Frank X. Walls, secretary; Dr. Davis J. Doherty, treasurer; Dr. W. C. Christopher, necrologist.

There are twenty lepers in Minnesota, according to the report of the marine hospital service. They are all imported, however, and Dr. Bracken, of the state board of health, says there are no cases on record among native born Americans of Minnesota. There is no fear, therefore, that the disease will spread. There are fourteen cases in North Dakota, three in Wisconsin, and one in South Dakota.

What is claimed to be the finest insane hospital in the world has been completed at Cherokee, Iowa. It will accommodate 1,000 patients on the start. It is located in the center of a farm of 840 acres, and the foundations are one mile around.

The London correspondent to the Therapeutic Gazette says: "A large London hospital has recently been unfortunate in suffering two deaths from tetanus after subcutaneous injections of gelatine for the cure of aneurisms. The evidence given in the coroners court told one nothing of grounds upon which death was attributed to tetanus. It is hardly probable that any article contaminated by the baccillus can have been used in the preparation or administration of the solution. Moreover, similar symptoms have been recorded in other cases. A writer in the British Medical Journal suggests that the symptoms were due to formation of capillary thrombi in the nervous system, leading to fatal convulsions."

The Value of Abdominal Palpation in the Diagnosis of Diseases of the Stomach and Intestines.*

By Charles D. Aaron, M. D. Detroit.
Professor of Clinical Gastro-Enterology in the Detroit College of Medicine; Consulting Gastro-Enterologist at Harper Hospital, etc.

When your president invited me to read a paper before the Detroit Medical Society I was anxious to select a subject which would be of interest to the general practitioner. The subject which I have selected is one which, I feel, has not had the attention from the profession that it deserves, and one which is often overlooked in the diagnosis of diseases of the stomach and intestines. I shall speak of Palpation as a method in the diagnosis of gastric and intestinal diseases. Palpation furnishes the most important data for the diagnosis of certain cases of stomach and intestinal disorders. The correctness of its results depends, of course, on the degree of technical expertness in manipulation, for while there are some general rules in the procedure, it may be said that in this as in every thing else much depends on practice and experience.

The abdomen of the patient should be brought before examination into a state of as complete relaxation as possible. The patient should lie on his back, the head should be pressed firmly backward into a pillow, and deep, slow inspirations should be made through the open mouth. The examination, dependent upon the part of the abdomen under observation, is much assisted by flexing the thighs and extending the legs. In some cases it is advisable to elevate the back, though in others the examination must be made while the patient is in the lateral position. The physician should never palpate while standing; in fact, he should avoid every possible disturbing influence, such as the weight of his body; preferably he should sit on the edge of the bed. He should lay his hands flat on the abdominal walls, and should avoid all severe pressure of his fingers. It is best to begin softly, and allow the pressure to become gradually greater, though usually an intense pressure will not be necessary. The hands should always be warm when palpating, for cold hands cause contraction of the abdominal muscles and prevent deep manipulation. If the first examination does not give sufficient results the intestines should be evacuated by a thorough purgation before another examination is made. The bi-manual examination is often quite valuable. The fingers may be introduced into the vagina or rectum, while the abdomen is manipulated with the other hand. In cases where the tension of the abdominal walls is so great that palpation is not practicable, chloroform narcosis may be resorted to.

Palpation determines whether the abdomen is sensitive to pain or not. Sensitiveness to pressure in circumscribed spots might fix the seat of bowel-obstruction. We may find the abdomen sensitive to pressure along its entire extent, and this may be indicative of diffused peritonitis. General meteorism, developed acutely, produces in itself a high degree of hyperæsthesia. Often we can feel through the abdominal wall intestinal loops which are movable. While probing for their contour and thickness we may obtain important hints. We must aim especially at fixing the seat of an obstruction, and we may obtain it by palpating, if we have previously reduced the meteorism. Sometimes the palpating hand discovers an abnormal resistance, which may prove to be a tumor adjoining the stomach or

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*Read before the Detroit Medical Society, February 12, 1902.

intestines; or again, we may feel a hard lump and this prove to be a segment of the intestine which through hypertrophy has become thick and stiff and is filled with stagnated material.

The size, form and position of the stomach can be determined by palpation and its boundaries can often be made out with considerable accuracy. The boundaries of an empty stomach cannot be determined; it is only after the stomach has been inflated with gas or filled with fluid that they can be ascertained. Before proceeding to palpation it is advisable to observe whether the stomach is sensitive when expanded; whether the pain is confined to a circumscribed spot or is general; whether it is spontaneous, or occasioned only by persistent pressure. It is important to ascertain whether acute pain or simply an unpleasant sensation results from the pressure. The expression of the patient's face will here be found far more trustworthy than his word. Localization of pain in comparatively remote parts is an important aid to diagnosis. Painfulness in the epigastrium is not always attributable to the stomach and may be due to an inflammation of the left hepatic lobule; nor does hyperæsthesia in the region of the large curvature always point to gastric complication (1). It is impossible to make an exact localization of pain in cases where the pylorus is involved, or the small curvature and its vicinity, unless the stomach be fallen. Sensibility to pressure, merely an uncomfortable sensation without actual pain, is often a premonitory symptom in several kinds of inflammation of the mucous membrane of the stomach. We find this in chronic gastritis, in neurosis of the stomach, in hypertrophy of the pylorus, and in carcinoma not yet sufficiently developed to be amenable to palpation. Circumscribed pain of gastric ulcer is so typical and unique as to be easily distinguished from all other kinds of abdominal pain. This pain is a burning, sore sensation, so that often, while undergoing palpation, the patient will try to ward off the hands of the physician.

For the discovery of tumors, palpation is one of the best methods known (2). The hand must be strenuously pressed against the patient's back, so as to bring the palpating hand into closer contact with the neoplasm. The bimanual method is preferable in all cases of tumor. The tumor is located by means of the one hand, the pressure applied being gradually increased while the other hand determines size, form, consistency, irritability, flexibility, etc. It is extremely difficult to determine by palpation alone, whether a tumor is attached to the stomach or to some other organ. For example: there is a strong possibility of mistaking a tumor for the pancreas. In a normal condition the pancreas cannot be felt through the abdominal wall, but when the integument is relaxed and the patient emaciated and the stomach empty, the pancreas may be felt in the epigastric region and may easily be mistaken for a tumor. Furthermore, the lymphatic gland, situated below the large curvature in the gastro-colic ligament, may become swollen under certain conditions, in which case it is not infrequently mistaken for a small movable tumor (3). The stomach is connected with the diaphragm and normally moves during respiration. This point is important in deciding whether a tumor is attached to the stomach or not. Should we find by palpation that the tumor moves downward during inspiration, we may conclude that it is attached directly to the stomach walls (4). Tumors of the pylorus are less affected by movements of the diaphragm. A respiratory displacement of a tumor in the pyloric region indicates that the tumor is connected with the liver. The peristaltic movement of the stomach will at times produce sudden disappearance and reappearance of tumors which were easily palpable but a moment before. The total failure of stomach tumors to respond to this passive displacement points to perigastritis (5). In case the stomach be greatly dilated or sunken, as often occurs in pyloric carcinoma, it follows logically that the tumor is drawn down with the stomach, and when through perigastric adhesion the tumor becomes fixed in this abnormal position, it is apt to occasion error in the diagnosis. It is impossible to palpate tumors in the posterior wall of the stomach unless the stomach be empty; while tumors differently located are best examined when the stomach is filled.

The Algesimeter (6) is an instrument constructed by Boas, for ascertaining the intensity of pain in circumscribed localities. The apparatus consists of a hollow cylinder in which there is a spiral spring. The cylinder is provided with a scale which registers the pressure on the spiral spring, which is from a half to ten Kilo. An indicator follows the spiral in such a manner as to register the degree of the pressure that has been exerted. In order to define the limits of a sensitive locality three plug-like attachments can be connected with the lower end of the apparatus. The test of irritability in the epigastrium indicates the following facts: A normal stomach will endure a pressure of five to ten Kilo. The stomach is most sensitive in the case of ulcer, registering then a slight pressure of one-half up to three Kilo. This test of endurance is so reliable, that, according to Boas, the toleration of a greater pressure practically eliminates the existence of an ulcer. A patient suffering from carcinoma will endure from two to four Kilo. Chronic gastritis and nervous dyspepsia exhibit the least deviation from normal sensibility.

By applying the finger-tips to the stomach with a short,, pushing movement, a sort of splashing sound is heard. Under normal conditions this sound can be heard only after the ingestion of a great deal of liquid and as a rule it is not emitted from any part below a line drawn horizontally through the navel. This splashing can at no time be heard in a normal empty stomach. While in dilatation, atony and gastroptosis it is easily produced.

The several sections of the intestines call for a method of palpation peculiar to each part.

It is very difficult to find the duodenum by palpation. Only when we can discover the head of the pancreas, which it surrounds in the form of a horse-shoe, have we an approximate guide for manipulation; it is especially helpful if we can determine at the same time, the position of the gall-bladder (7). If a tumor is present in the ascending section of the duodenum, it lies to the right of the median line, within the lower border of the ribs, the navel and the gall-bladder. A tumor thus situated will be found, on palpation, to be easily movable. If the growth arises in the descending or transverse section of the duodenum, it will lie in the same position, but it will be little, if at all, movable, being firmly fixed by the pancreas and the peritoneum.

In contradistinction to the large intestine, palpation of the small intestine does not give good results. Whenever we can palpate the large intestine, we can also determine the extent of the small intestine. When, however, the large intestine can not be palpated, and nothing definite can be ascertained as to its position, then we cannot make out that. part of the small intestine which lies between the umbilicus and the pubes. In cases of typhoid fever, after laxatives, enteritis and chronic constipation, palpitation is attended with moderate gurgling, which, under normal conditions, is not observed. This gurgling, however, ceases quite suddenly, unlike that which is observed in the palpitation of the large intestine, for after two or three pressures it disappears. The loops of the small intestine which lie in the right iliac fossa produce a similar gurgling in typhoid fever and cholera asiatica, but of longer duration. The ileum can be palpated in typhoid fever, and it is found quite painful and at times thickened.

The appendix vermiformis can not always be palpated precisely, because of its lack of firmness and the extreme variableness of its position. For palpating appendix, we must draw the examining fingers in a straight line from the umbilicus to the anterior superior spine of the right ileum. In doing this the pressure exerted should be deep enough to feel distinctly, along the whole route traversed by the examining fingers, the resistant surfaces of the posterior abdominal wall and of the pelvic brim. In this way only can we recognize the normal or the slightly enlarged appendix. In palpating here, it is necessary to press so that we reach the posterior wall and the soft, yielding structure will glide away from the approaching finger (8). The appendix is recognized as a flattened, ribbon-shaped structure, or as a more or less cylindrical, firm organ when its walls have been thickened by inflammation. When it is the seat of inflammatory changes, the appendix vermiformis is more or less sensitive to pressure, while the normal appendix exhibits no special sensitiveness to pressure. It is said that 200,000 cases of appendicitis are annually treated by the physicians of the United States (9). It appears from the statements made by patients to the surgeon that few of these appendices are accurately palpated. An abcess that has formed in appendicitis, and has persisted there for some time, can be palpated and recognized as such.

The cæcum can be palpated only when the abdomen is relaxed. The manipulator sits at the right of the patient in the usual manner, with his fingers slightly bent on the abdominal wall over the right inguinal region, moving them downward and outward in a perpendicular direction above the middle of Poupart's ligament. We try to find the iliac fossa, against which the cæcum can be pressed when palpated. At times the cæcum is higher than the crest of the ilium, and in this case, place the flat part of the left hand under the right lumbar region, making a counter pressure with the right hand. The line which corresponds with the axis of the cæcum goes from within downward and outward and transects usually the linea spino-umbilicalis almost at right angles (10). The cæcum can be felt as a somewhat firm cylinder which becomes rounder and broader the further down we palpate. The pressure produces gurgling. The cæcum behaves in this manner not infrequently in healthy persons. In patients with chronic constipation the cæcum is often found as a resisting body, firm, pear-shaped, movable, and responding to pressure with loud gurgling sounds. This resistant mass is formed by the stagnation of fæcal matter. In hypertrophy of the itnestinal walls the cæcum feels like a solid cylinder in varying proportions, contains some gases, but gurgling cannot be produced. The cæcum is distended after purgatives and in diarrhœa of various origins, especially in summer enteritis and gastro-enteritis; but in these cases its walls and its lower border are not clearly palpable, but we get by palpation loud gurgling sounds as far as the cæcum extends. This gurgling is not only heard but felt and where it ceases, the limit of the cæcum may be fixed. An exception to this is Asiatic cholera in the asphyxiated stage, when neither the cæcum nor other sections of the colon can be palpated. In typhoid fever the cæcum is dilated, its resistance is heightened, and it is sensitive to pressure. Palpation of the cæcum usually produces gurgling sounds, which point to the presence of gases and fluids. The palpation of scybalæ hints at pathologic conditions interfering with peristalsis and absorption. The cæcum can be mistaken for a kidney which has floated into the region of the cæcum and has become fixed there through adhesions. Its smooth, bean-shaped form and its pulsation at its hilum, makes it easily recognizable. It may also be said that the kidney is extraperitoneal. If the colon be inflated, the kidney which lies behind it is likely to disappear. In cases of ptosis of the transverse colon, mistaken identification may also take place. The cæcum is best recognized by its circular end, while again a continuation beyond the median line can be ascertained in the transverse colon. It is possible also in such cases to find the cæcum on the outside of the transverse colon (11). Sometimes a part of the ileum is taken for the cæcum, but the diagnosis can be established by palpating the curved border of the cæcum; the ileum disappears at the border of the pelvis.

Palpation of the ascending and descending colon is very uncertain, as loops of the small intestine lie in front of them. Localization of the hepatic flexure of the colon is also difficult, inasmuch as it lies somewhat behind the liver. The splenic flexure can be determined more easily, a circumstance which is quite important in practice. This segment, when full, feels similar to that of the spleen. It is found at the left lower border of the thorax, in the region of the spleen, and in the left, upper back, of the abdominal cavity.

The transverse colon lies usually immediately beneath the large curvature of the stomach; when the position of the latter varies, a like variableness in the position of the transverse colon takes place. In general, it may be said that in the average man the transverse colon is one centimeter below the umbilicus. The section of the transverse colon which is accessible to palpation has either a horizontal direction, as is the case when the transverse colon is high, or it is bow-shaped with the convexity downward. It is quite rare to find that both parts of the bow, right and left of the median line, are exactly alike. Usually the right half is more horizontal, while the left rises somewhat abruptly from the median line. Some times the transverse colon takes the form of a Roman V. In palpation of the transverse colon we can some times produce loud gurgling sounds which point to the presence of gas and fluid. This has been observed after taking laxatives, in various kinds of diarrhœa and in typhoid fever. On the other hand, a cylinder which feels somewhat firm without gurgling is found in chronic colitis. The transverse colon is felt in most cases as a soft rope; under pressure low gurglings are heard; these suggest pulpy contents, mixed with gases. Palpation of hard scybalæ in the transverse colon is rare, and, just as in the case of the cæcum, points to modifications of the peristalsis of the large intestine. If scybalæ are felt in the transverse colon, they are found to exist not isolated, but in large numbers, and at the same time they exist in other segments of the colon.

The position of the transverse colon depends on the position of the large curvature of the stomach, and it has a corresponding freedom of movement during respiration. The higher the colon lies, the greater the intensity of its movements during respiration. The passave mobility of the transverse colon is very great. In palpation it can be moved without difficulty upward and downward three to four centimeters. The consistency of the transverse colon changes often without regard to its contents; it may at first feel firm, and become soft while still under manipulation, and at times it may even disappear under the palpitating fingers. This may be explained as a purely physiological phenomenon, in contradistinction to contractions seen in intestinal stenosis or obstruction of the bowels, accompanied by cramp-like pains. The palpation of the transverse colon is made easier through its superficial position and relation to the stomach. In emaciated patients it is marked by sharp outlines. If, in consequence of continued atony, it has become a wide, loose sack, it may be mistaken for a dislocated stomach. In palpating it at the height of the navel, we feel about the breadth of the abdomen an extensive festooned arched organ of the consistency of an air-pillow, which can be easily isolated by the hands from the other organs. It can be differentiated from the stomach by dilating the latter artificially with air.

The sigmoid flexure should be palpated in the left inguinal region, and also in a perpendicular direction above the middle of Poupart's ligament. The investigation of the sigmoid flexure is quite easy. It feels like a cylindrical rope, moderate in consistency; no gurgling sounds are produced during palpation. Though gurgling is observed in various diseases of a diarrhœtic character, after laxatives, in typhoid fever, etc. In these cases the sigmoid flexure is dilated. In dysentery the sigmoid flexure is felt as a solid, thick cylinder, is painful under pressure, and no gurgling sounds can be produced. The contents are usually mushy or fluid, as in diarrhœa. In chronic constipation scybalæ may be felt occasionally, but fæcal matter can be easily recognized in the sigmoid flexure as smooth spherical or cylindrical masses which yield when pressed toward the back of the pelvis. The sigmoid flexure often has peculiarities of the same nature as those of the transverse colon. At the cessation of the diarrhœa the sigmoid flexure may be reduced below its normal size, assume a ropy form without the production of gurgling sounds, and become as thick as the thumb or index finger. But when by palpation we find that the transverse colon or cæcum is enlarged, considerable gurgling is produced in the sigmoid flexure. We may often find the sigmoid flexure without feeling the transverse colon; but, on the other hand, we can not feel the colon transversum without at the same time feeling the sigmoid flexure; there is but one exception, and that is a stricture of the colon in the neighborhood of the hepatic flexure. Easy palpation of the sigmoid flexure in adults is a normal phenomenon. Where the sigmoid flexure can not be found, we may be certain that there is some cause for the difficulty, as, for instance, where there is a hernia within the abdominal cavity. It is possible that the sigmoid flexure may be taken for a depressed transverse colon. The latter is recognized by the fact that it can be followed several centimeters beyond the median line, while the sigmoid flexure disappears into the pelvis. Ptosis of the transverse colon is also frequently taken for the sigmoid flexure, but the latter can be traced as proceeding from the pelvis outward. Quite frequently it is found that the sigmoid flexure lies above the pubes and adjoins directly the abdominal wall, assuming the form of the Greek omega. Such a position of the sigmoid flexure is clinical.

So far as the diagnosis of the seat of carcinoma and other tumors is concerned, palpation will give valuable data, for the reason that we ascertain the mobility of the tumor and refer it to a definite location.

A strangulated section of the intestine becomes frequently recognizable by its dilatation and immobility at a circumscribed spot, disclosing itself through stronger resistance to palpation and asymmetric forward arching in inspection.

In intussusception we can prove in fifty per cent of cases the presence of an enlargement in the abdomen which can be found in children more clearly and more easily than in adults. The tumor is usually smooth, hard, cylindrical and irregular; its compass varies from the size of an egg to that of the fist of a man; and some times it goes to the length of the forearm (2). Not infrequently it becomes noticeable in paroxysms of pain only, and escapes the hand of the palpator in the intervals. Most constantly the evidence of enlargements is present in ileo-cæcal and colon invaginations. Where a tumor is present it may originate in an ileo-cæcal invagination which can be readily found in children; it does not lie then in the region of the cæcum but in the part above and to the left of the umbilicus, which corresponds to the transverse and descending colon.

In tuberculosis many palpable tumors are recognizable. These may be due to the enlargements of the mesenteric glands.

We must not forget that the results from palpation may vary in successive examinations, inasmuch as the perception of certain enlargements may vary. In fact, tumors have been known to disappear transiently, and may be perceived again after the lapse of some time.

In conclusion I wish to say that in presenting this paper I do not wish to be misunderstood as claiming for palpation that by it alone we can diagnose disease, but rather that it should be employed as one of the many other means at our disposal to arrive at the correct conclusions.

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There are now 909 lepers and 164 healthy persons at the Molokai settlement in Hawaii, according to a report just received from the quarantine officer. In the last ten years only ten clean residents have become lepers. The oldest patients on the island arrived in 1874 and 1875. The recruits to the settlement each year during the last decade range from 132 in 1890 to 85 in 1900.

Practical Obstetrics.

By John Inglis, A. M., M. D., of Pekin, China.

An eminent physician said some time ago: "Today every medical student studies surgery which few practice and few study obstetrics which they all practice." Almost every physician, except probably the eye and ear specialist, is called upon to attend a woman in confinement. To the man going out into general practice no department of medicine will add more to his prestige or success than obstetrics.

A good accoucheur is generally a man with a good practice. This paper is merely to give a few practical points about succeeding in this most important branch of the profession. It need not be emphasized that every student should leave the medical school well grounded in the principles of obstetric science as given in any standard textbook. This is a sine qua non and no amount of application to practical details can make up for this lack. The first requisite in a good obstetrician is to be a gentleman in all that that term implies. Perhaps no where does perfect manhood and dignity of character count for more than in the lying-in chamber.

It creates confidence on the part of the expectant mother and insures the respect of the father. But this kind of conduct cannot be prepared for the occasion. It must have become a part of the physician's make-up. He must be a man who respects womanhood. Woman instinctively feels this respect or the lack of it. Years of pure thinking and pure speech can alone give this quality. There are men who will employ physicians in other capacities, but who will not employ them to attend a wife in confinement if they know them to be other than gentlemen.

The great majority of obstetric cases will be uncomplicated deliveries. Here is one place where the honest, sincere physician may prove himself a comforter. "It is true and pity 'tis true," that some men like to make capital out of every case and let it be known the first thing as, "the most difficult delivery I've seen," etc., etc., when there is no need of causing the least anxiety about it. If every thing is normal, and you have every reason to expect that it will be, say so. It cheers her who has the pain to bear and saves an anxious husband many a time some blue hours. A doctor should always relieve anxiety where it is possible. In many cases of sickness the only real service a physician can render is in relieving anxious fears. The keynote of success in normal labor is—asepsis. It is not anti-septics. No greater mistake can be made than to suppose that a vigorous use of anti-septics will atone for the want of asepsis.

An antiseptic delivery may be accomplished in any house or any room where you can have sterilized sheets. It is sometimes profitable for the physician to keep these on hands if they cannot be provided. The physicians' obstetric outfit should always be ready. Little time should elapse between the time of one delivery and being prepared for the next. A complete obstetric bag should contain: A pair of forceps; a vaginal speculum; Periniel needles; needle holder; hæmostatic forceps; scissors; Baines' bag; Vulsellum forceps; long uterine dressing forceps; Placenta forceps; Crochet; a perforator; a hypodermic case, containing morph. sulph., strychnine sulph., Glonoin, hypodermic ergot; ether and chloroform; a dilator; tablets of merc. bichloride; 2 per cent sol. silver nitrate lysol, or carbolic acid; vaseline carbonized; catheter; stethoscope; silk sutures and needles; aseptic funis cord;

jar of iodoform gauze, 5 per cent; absorbent cotton; a hypodermaclysis needle; a nail brush, and a fountain syringe in good order should never be forgotten. Besides these he should be provided with any medicines which he finds useful.

He should have at the house: Good soap, vinegar, a bed pan, obstetric custion, absorbent cotton, rubber sheeting, aseptic cotton pads, clean towels and plenty of them, abdominal binder, carbolized gauze, normal salt solution, an electric battery, Vulva pads, an abundance of hot water that has been boiled.

It is true there are some things mentioned here that will not be needed till the one hundredth case, e. g., an electric battery and a hypodermacylsis needle. But the man who has once needed them when he did not have them with him will never regret having carried them one hundred times to use them just that once. And as we never know just when that once will be, the careful physician will take no chances.

There are three stages in labor: 1, From beginning pains till dilatation of os; 2, from dilatation of os to birth of child; 3, from birth of child till expulsion of secundines and contraction of the uterus. The physician on arriving at the house has his coming announced to the patient. He should make as many preparations as possible outside of the chamber. Should see that there is a good fire where instruments could be boiled if needed. If it is necessary to do more than wash the hands it should be done in another room. The arm of whichever hand is used should be bared to the elbow and cleansed as for a surgical operation.

There should be three basins: The first containing wash water for the physician; the second containing a bichloride of merc. sol. for the physician; the third containing a bichloride of merc. sol. or Lysol solution for the genetalia of the patient. Creolin is also a good preparation for the third basin. The external parts should be cleansed with the contents of the last before the examination is begun. It is a good plan to have a pad of absorbent cotton dipped in an antiseptic solution, squeezed out and placed on the vulva. This saves cleansing at every examination, though the physician should not neglect to clean the hands well and immerse them in the solution of bichloride at every examination. The first examination should be thorough, the physician satisfying himself of the presentation and the condition of the os. Experience will make a man fairly sure of the time labor will take place by the dilation of the os, although it is always best to give this judgment with some reserve. Last fall while assisting an old physician who had been in practice over thirty years, I had an illustration of how expert some men become in this line. This physician was called six miles from his office at 11:30 a. m. He returned at 4 p. m. and told me to go out at 8:30. I arrived at the house about that time and the child was born at nine. Frequent examination should be avoided, although it is necessary to make them sufficiently often to keep informed of the progress. The bowels should be emptied by an enema and the urine voided frequently. It is well for the physician to withdraw from the room if he is satisfied that everything is satisfactory, but remain within a moment's call. During the dilatation of the os to the size of a silver dollar, the woman should be allowed to sit or stand or even walk around the room if she so prefers. It is better not to give solid food in case an anæsthetic should be needed later.

Complications and abnormal deliveries must be treated along the lines now well established in midwifery and these are to be found in many able treatises constantly being published. When a physician finds that a case has assumed grave proportions or when it seems best to give an anæsthetic to the surgical degree he should, if possible, have an assistant called. Today a man needs to be well established in his profession who can afford to lose a woman in child-birth without having called in assistance.

Never undertake a case of Placenta previa alone, unless it is absolutely unavoidable. The physician is guilty of criminal negligence who does. In such cases there is responsibility enough for two physicians and the best nurse obtainable. Child-birth is coming to be regarded as a comparatively safe ordeal under proper medical care. The Lying-in Hospital of Chicago has just completed 2,000 deliveries without the loss of a mother from any cause. I know of men in private practice who have attended 700 and 800 confinements without a maternal mortality. Others who have run a thousand with one death from all causes. The public now expects these things. Rupturing the perineum and improper delivery of the placenta and membranes forms, perhaps, a large per cent of the mistakes of beginning obstetricians. The former will occur in at least 35 per cent of cases, do the best we may. Oiling the perineum and abdomen for weeks before confinement, the use of the sitz bath during the last three months, massage of the perineum during the descent of the head at the time of labor, retarding the head until the perineum has stretched and supporting the latter with the hand during the birth of head and shoulders, finally turning the patient onto her left side when we see that a tear is inevitable, will accomplish about all that we can. Preservation of the perineum is a consummation devoutly to be wished.

The following receipt a few years ago was to be seen variously modified in many medical journals as a preventative of perineal rupture, if applied locally during labor:

Chloroform. f Zi.
Spts. Cologne, f Zi.
Etheris Sulphur, f Zi—M.
Sig. Locally to perineum.

In some cases it contained alcohol instead of chloroform. Some reports of this preparation are very flattering, but I have never been satisfied that it does any good.

Always repair at once a torn perineum unless it is of such a degree that it needs to be done later. Strong silk or wire sutures are best for lacerated perineums. I am very friendly to a few whiffs of ether or chloroform to relieve the severe pains of delivery. Anæsthesia is certainly safer in labor than in ordinary cases. Credes method of expelling the placenta should be well studied, although it is important always to give nature a chance.

The placenta must invariably be examined to make sure that no piece has been left behind. Should hemorrhage follow the birth of the child cleanse a hand and remove the after-birth at once. When it is necessary to introduce the hand into the womb itself the fingers may be slipped beneath the edge of the placenta and peel it off like an orange skin. Severe hemorrhage is fortunately not an accompaniment of normal labor. When met with it taxes the powers of the best physicians, and he may consider himself fortunate if he does not feel his hair turning gray. Half the battle consists in being ready for it. The late Prof. Etheridge, of Rush Medical College, used to say: "In hemorrhage post partum compress the aorta until you collect your wits and decide what to do."

Perhaps the following may well be kept in mind:

1. Compress the abdominal aorta.
2. Give an intra uterine injection of sterilized water (120°).
3. Compress the uterus. It is probably better to try this first as slight hemorrhage can always be controlled by compressoin, which induces contraction.
4. Fill a sponge (cotton) with vinegar and squeeze out into the womb. Give a hypodermic of ergot if the uterus is empty, if not, empty it at once.
5. Use the battery.
6. As a last resort draw down the womb with insellum forceps and pack with iodoform gauze.

This last will seldom be called for if the physician is always prepared to act at the inset of a hemorrhage.

Position is considered of more importance in Europe than we have given to it in America. The following are keynotes on position and may be found useful. I do not claim them as original, nor do I know to whom to credit more than one of them.

1. Normal labor, left side.
2. Walcher's position, i. e., patient's hips brought to edge of bed, legs hanging down, when the head is arrested at the brim of the pelvis.
3. Knees flexed, legs pressed against the abdomen, when the head is arrested at the outlet of bony pelvis.
4. Legs straight out when the head is arrested on the perineum.

There is an unwritten law that a physician must never leave the house of his confinement case until at least one hour has elapsed since the expulsion of the placenta. It is a good rule to which to adhere.—Phagocyte.

Calomel, Its Uses and Abuses.*

BY C. W. KELLOGG, M. D., KEKN CITY, CALIFORNIA.

Calomel, without doubt, is the most extensively used preparation within the range of materia medica; more particularly is this the case within the jurisdiction of the San Juoquin Valley Medical Society. At the same time, from my own personal observation, I believe that its physiological action and scientific therapeutic application are generally less understood and its use is associated with more and greater fallacies, which have been handed down for generations, than any other drug in use. Why the physicians of this twentieth century should blindly accept, apply, practice, and teach the precepts, practices, and prejudices empirically attached to the use of this remedy by our predecessors and forefathers, both professional and lay, in the face of the teachings and demonstrations of modern investigation, "surely surpasseth all understanding."

I shall present for your consideration the following propositions in regard to the action and use of calomel: (1) Calomel is in no sense a cholagogue; (2) calomel is not an intestinal antiseptic; (3) salivation is but a physiological action of calomel; (4) the fallacy of heroic doses of calomel.

Calomel is not a cholagogue. Upon this point I can do no better than quote Bartholow, whose language is brief and to the point. He says: "The misconceptions of the action of mercurials on the liver has prevailed chiefly because of the peculiar evacuations produced by it. The true explanation of the nature of these stools has been given above, and will be quoted by me later on, but the subject should not be dismissed without further reference to the experimental work devoted to the elucidation of this subject within the past few years. The experiments of Roehrig, Rutherford and Scott on animals, and the observations of Westphalen and Ranke in cases of biliary fistula in man, have thrown a flood of light on the action of mercurials and there seems to be no longer any reason to doubt the accuracy of the conclusions reached. It has been shown that calomel lessens the physiological action of the liver, and consequently diminishes the production of bile. Instead of stimulating the liver, or acting as a cholagogue, calomel must be regarded as a sedative, and as having the power to allay an irritable condition of the liver." I deem it unnecessary to make further quotations, but will simply refer you to any of the prominent authors of today, in whose works you will find similar expression.

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*Read at meeting of the San Joaquin Valley Medical Society, March 11, 1902.

Calomel is not an intestinal antiseptic. It was formerly supposed and taught that if calomel were exposed to heat, light, cold, age and especially to an excess of chlorides, Hg. Cl., mild chloride, would be converted into the poison Hg. Cl 2, or bichlorid. This is surely fallacious, from the fact that, whilst we know that none of these precautions are generally taken, at the same time I doubt if a single instance of bichlorid poisoning has ever been recorded, due to the degeneration of calomel into bichlorid; nor is there any evidence to support a theory of such conversion within the digestive tract. It was formerly contended that its action was indirectly antiseptic in the intestinal tract, by its action upon the liver, and causing a free flow of bile, which was supposed to be an intestinal antiseptic, preventing fermentation and decomposition, and was a germicide. It is conceded that calomel, like any other active purge, stimulates the vermicular action of the small intestine, particularly affecting the duodenum by actual irritation, and that an increase in peristalsis naturally will tend to increase the flow of bile from the bileducts; but it has been demonstrated beyond cavil that bile is in no sense an antiseptic nor germicide, but simply a toxic waste product, which teems with germs. Bile is intensely irritating to the intestinal mucosa, hence, when a remedy to produce active peristalsis is indicated, none will equal the administration of oxgall internally. This subject will be further touched upon under another caption.

Salivation is but a physiological action of calomel. Of all the fallacies associated with the use of calomel, this of salivation is the most common and absurd. It is the universal opinion among the laity, and even generally believed among members of the profession, that the use of hot, cold, or acidulated drinks, associated with the use of calomel, will tend to produce salivation. In other words, that acids, for instance, are synergists of mercury. This, however, is not true; the only preparations which promote the action of calomel are depressing medicines, antimony, alkalies, especially alkaline chlorids. That certain acids, and perhaps all, are antagonistic and even incompatible, especially nitrohydrochloric, is conceded; but that a glass of strong lemonade taken on top of a dose of calomel will increase the liability to salivation, I will absolutely deny, and challenge any member of the profession to give proofs or a logical reason for the same, except empiricism, which is prejudiced by early teachings. You certainly will find no such teaching laid down in the text-books of today. Again I say salivation is but one of the physiological actions of calomel, and that this action is not accelerated by acids. If you are afraid of salivation, why do you put calomel into a stomach where it will come in contact with hydrochloric acid? Why do you use it when you know that lactic and butyric acids may be present? Why, when the normally-alkaline intestinal juices are acid from fermentation, do you not hesitate in using calomel? Why do you follow a course of calomel with an acid citrate of magnesia? If you do all of these things, why do you urge upon your patient that, if he takes anything sour, he will be salivated? Let me again quote from Bartholow: "Mercury has a selective action on the lymphatic system, and notably on the salivary glands and pancreas. Among the earlier symptoms of its action are an increase of the salivary secretion, an alteration of its quality, fetor of the breath, swollen tongue, softness of the teeth, sponginess of the gums, swelling of the parotid, submaxillary, and sublingual glands, aching of the jaws and teeth, a dark line along the margin of the teeth, general muscular soreness and aching limbs, and some elevation of temperature. To this state are applied the terms acute mercurialismus, ptyalism—in common language, salivation."

The Fallacy of the Heroic Dose of Calomel.—A large dose of calomel acts as a purge, by its own weight and by its irritating action upon the intestinal lining; but, as all writers agree, why give calomel simply for its purgative effect, when less objectionable agents may be employed with equal and even better success? Calomel is an insoluble salt, and escapes solution in the stomach, but is decomposed by the alkaline intestinal secretions, the oxid of mercury being precipitated, a very small portion being absorbed into the blood and changed into an oxyalbuminate, the rest being converted into a sulphid and excreted with the feces, giving to the feces the charasteristic mercurial stool, the color of which was formerly supposed to be due to the presence of bile. It has been abundantly demonstrated that, for the systematic effect of calomel, one-tenth grain doses every 15 minutes, until one grain is taken, or one-fourth grain doses every hour, until the same amount has been taken, gives the best results.

Now, as to the true physiological action of calomel and the rationale of its use: C. J. Hempel says: "The lymphatic system is the grand center and starting point for the action of mercury, and it is the lymphatic system which mercury chooses for its point of attack in the living organism, and it is in the lymphatic system that mercury meets the inimical morbid force when called upon to combat and subdue it. Mercury acts upon the lymphatic capillaries as aconite does upon the capillaries of the venous system. It diminishes, prostrates and paralyzes their irritability, producing a series of phenomena in the lymphatic system exactly similar to the phenomena which aconite causes in the circulatory apparatus. These are the phenomena of congestion, attended with the symptoms of vascular excitement. It is from the lymphatic system that the veins derive, in a measure, their power of manifesting vital phenomena. If the lymphatics become clogged, or, to use a more classical term, congested, or engorged, must not the torpor of the lymphatic radicles react upon the radicles of the venous system? What the venous system is to the arterial, that the lymphatic system is, in a measure, to the veins. Torpor of the sanguineous capillaries may lead to acute congestions or inflammations. If this engorgement reaches the venous capillaries through the lymphatic system, the phenomena of inflammation or congestion are of a milder type, the accompanying fever is less acute, and the pulse, instead of being full and bounding, hard and rapid, as it always is in true inflammation, preserves a certain softness, and only becomes moderately accelerated. Considering that the lymphatics are distributed through every tissue and organ of the animal economy, is it difficult to understand that torpor and engorgement of these vessels may lead to an almost interminable series of disorders, enlargement and induration of glands, effusions into cellular tissues, suppurations and ulcerations of every tissue through which lymphatic vessels are distributed, and finally a universal decay of every organic structure, may be the ultimate consequence of lymphatic weakness and obstruction?"

The principal action, therefore, of calomel is primarily stimulation of the lymphatic system; hence it is the remedy par excellence in conditions where the system is clogged and overladen with toxic and waste products, to be used at the outset only, and not to be long continued, for fear of carrying its action beyond the point of stimulation into that of depression and paralysis. The key-note is, Stimulate the secretions, bleed the lymphatics; do not stop calomel until you have accomplished this, even if you have to carry it to the point of salivation. You who practice in this valley know how absolutely useless it is to expect any action from your quinin, it makes no difference what dose may be given, unless you first succeed in stimulating the secretions. With a quotation from Hare as to the condition known as bilious fever, in which calomel has always proven a sheet-anchor, I shall close. Hare says "that the entrance into the stomach of certain food-stuffs, which are either ill prepared or improper for gastric digestion, rapidly causes the development of active fermentation and a splitting up of these bodies, with the formation of lactic and butyric acids, which irritate the gastric mucous membrane, and thereby bring about a faulty secretion of mucus, which aids in making still further trouble. By the same means the circulation of the stomach is disturbed and becomes abnormal, and the intestine, liver, and pancreas receive reflex irritation, to which they are not normally exposed. Further than this, the irritated stomach fails to convert its contents into peptones and the general features of chyme, and too early or too late drives out into the duodenum a mass of semi-digested and fermenting material, utterly unfit for intestinal digestion and absorption, thereby disordering the functions of these parts still further, at a time when they are not prepared for the reception of any food. The secretion poured out by the different glands varies from the normal; the alkaline are not able to overcome the normal acid of the gastric juice, plus the lactic and butyric acids; and finally the reaction of the intestines becomes acid instead of alkaline, with the resulting irritation and secretion of morbid juices and mucus. The trouble, when existing in the stomach, gives rise to headache and discomfort, a bad taste in the mouth, and perhaps pain, and is followed by fever, languor, jaundice, and flatulence when the intestine is affected.
—Oc. Med. Times.

"Birthmarks."

By David W. Reid, M. D., Jacksonville, Ill.

The belief in birth-marks is very old. When Jacob placed striped rods before the pregnant ewes of Laban's flock to encourage the production of mottled and parti-colored lambs, he acted upon a current superstition of the time. As the life of the offspring in utero is wholly dependent upon the mother, what more natural, in the absence of any positive knowledge of physiology, or even anatomy, than to attribute any unusual blemish or marking of the offspring to some corresponding incident, or accident, on the part of the mother?

But the time for taking such things for granted is past, and we find ourselves asking, how and why? How does the mother nourish the fetus? What is the relation of the child to the mother after conception and during pregnancy? Is the child part of the mother during this period? By no means. The fetus floats in a closed cavity within the body of the mother. The mother keeps it warm, protects it from external violence and keeps the placental tissue charged with blood from which, as from a well-filled larder, the fetus draws its nourishment; after birth the child's base of supply is changed from the placenta to the breast. Further than this, she has no connection with the fetus. There are no nerves passing from mother to child. There is not only no nerve connection between mother and child, but there is no direct vascular connection. The fetus has both an independent nervous system, and an independent circulatory system, the point of connection between the two being the placenta, in which the blood of both circulates, separated by delicate membranes, resembling the circulation of the blood in the lungs after birth.

The mental states of the mother are not reflected upon the brain of the fetus. Even should the mother die suddenly, the fetus suffers in no way till the supply of blood in the placenta is exhausted, when it dies also if not delivered immediately.

A birth-mark, whether a mere pigmentation of the skin, or an extra finger, an extra foot, or the absence of one, is due either to a deficiency or a superabundance of cell elements in the part affected, and it is hard to imagine any manner in which a fright or a longing, or the sight of a deformed person or a wild beast, or a reptile could so change the blood supplied to the placenta, that it would alter either the number or the arrangement of the cells in such a manner as to cause any resemblance to the object seen by the mother. To the credulous laity a simple mark or discoloration may be the work of a moment produced by a mental impression upon the mother, but to the scientist it is the deposition of a myriad of pigment cells, or the dilatation, perhaps the multiplication of veins and capillaries, and he asks the question, How?

The number of more or less serious accidents, frights, sights and longings as compared with the relatively small number of birth-marks is an argument against their casual relation. Few women pass through nine months of the most imaginative period of their lives without seeing or hearing or feeling something that can afterwards be recalled to account for any possible abnormality in the physical, mental or moral development of the child. Yet so seldom do physicians see a "marked" child, that when the mother's first question is heard, "Is it all right," we say yes before we have had time to count the trees or look for the strawberry marks.

More than this; most of the so-called maternal impressions are reported as happening in the latter months of pregnancy, after the fetus is fully formed, and when a "mark" would mean not a hyperthrophy, or an arrest of development, but a substitution of an abnormal for normal tissue. No "impression" is worthy of consideration whose occurrence does not tally with the period of development of the tissues affected. It is easy to see how a shock or a fright may so injure the mother as to interfere with the nutrition of the child. We can even imagine a sudden check to the tissues in process of formation at that time by such a cause, but to see how a fright, caused by the sight of a decapitated hen could react upon the head, rather than upon the foot of the fetus, or how the fetal blood supply could be so altered as to add to or subtract from the number of toes on a child's foot, just because the shock to the mother was caused by the sight of a crippled foot, rather than by an ague chill, is something beyond the power of our imagination.

There are men, however, who would laugh at birth-marks and intra-uterine malformations, as due to mental conditions of the mother, who still hold to the possibility of nervous changes in the offspring due to the influence of the mother upon the child in utero, but the trend of thought of today is toward the belief that not only are "birth-marks" in the ordinary sense a fallacy, but that it is impossible for any outside influence, such as a fright, or a longing, or a condition of happiness, or the opposite, on the part of the mother to have the slightest effect upon the development of the fetus either in the mental, moral or nervous aspect, provided the nourishment of the fetus be not interfered with.—Med. Fortnightly.

Prevention of Phthisis Pulmonaris.

By William A. Wood, M. D., Gallatin, Mo.

Before discussing the above subject, it is important to familiarize ourselves with the various channels through which this disease approaches its victims. If we undertake to meet it at its starting points, we must bear them in mind. The invasion of phthisis may occur by a tracheal and laryngeal irritation, by an irritation of the bronchial tubes, by hemoptysis, or it may assume a latent type, or again it may take the acute form. Now what are the clinical features of these different varieties? In the tracheal and laryngeal variety there is a ringing cough, soreness and pain in the trachea, hoarseness of the voice, followed by fever and emaciation. The invasion by bronchitis is marked by a short cough and no expectoration in the beginning, but when it does appear, clear and frothy. Sensations of languor and a tired feeling, with chilliness, alternated with flushes of heat in the evening, are invariably experienced. Wandering pains in the chest, a quickened pulse, and emaciation gradually follow. Physical signs at this stage shed very little light on the pathology of the case. In the latent variety, the incipient stage is seldom accompanied by cough, but there is a sense of weight and tightness about the chest, with dyspnœa on the least exertion. Later on cough sets in with bronchial irritation and many other developments characteristic of the bronchial form, which render a differential diagnosis between them exceedingly difficult. This form is often associated with anemia and suppression of the menstrual discharge in female patients.

Hemoptysis is sometimes the first symptom of phthisis, but this may occur quite independently of tubercular lesions. The acute variety, fortunately, is rare, compared with the other forms. This is what is usually called galloping consumption. It often completes its course in five or six weeks by the development of tubercles and gray granulations in both lungs. Both lungs are rapidly filled with gray granulations and yellow tubercles, varying in size from a pin head to rape seed. In these cases dyspnœa is an early and grave symptom.

The face becomes livid and covered with profuse perspiration; respiration, 40 to 50 per minute; pulse, 130 to 140; cough frequent and accompanied by a mucopurulent expectoration. The lungs become blocked up and death soon ends the intense suffering of the patient.

While there are some widely differing symptoms in these various forms of incipient phthisis, there are certatin pathological phenomena common to them all. Among them the most prominent and constant are anemia, emaciation and fever. All of these deviations from health are more or less the product of impaired nutrition. To these conditions, then, we must address our special attention. This is the objective point of all our efforts in the prevention of phthisis pumonalis. Diet, hygiene and medication must be the allied forces to hurl against this relentless enemy of human life. No time should be wasted in a fruitless search for microbes or doubtful remedies for their destruction. The thing to do first, is to relieve urgent symptoms and begin immediately to build up the defensive powers of the system. A constitution that can resist all the injurious influences of its environment, can be made to successfully defend itself against the inroads of the tubercle bacilli. Preventive treatment, to be effectual, should begin with the first approaches of the disease, and all the patient's habits of life should be ordered on new lines in harmony with the objects in view. He should be prepared for an outdoor life in all kinds of weather. He shoud be provided with suitable clothing for all atmospheric conditions. Every part of the body should be kept warm, dry and comfortable, whether the patient is in the house or in the open air. He should never be chilled by cold or be made to suffer from heat. When in the house, the air of his room should be frequently changed by free ventilation. Whenever it is possible, he should enjoy sunshine. No kind of food or medicine should be allowed to enter his stomach that might impair digestion or excretion. The food shoud contain the maximum of nutrient material in the most digestible and assimilable form. Moderate active and unlimited passive exercise should be provided for outdoor life. Change of climate we will not consider now, for the reason that not many patients are financially fixed to indulge in such luxuries. Medicinal treatment is sometimes a necessary part of preventive measures. Proper tonics are always in order. Quinine, iron and arsenic are often useful in certain anemic conditions, but at all times when it agrees with the stomach, cod-liver oil is the remedy. The only restriction to be placed on this therapeutic agent is that it must be administered in a form that will be acceptable to the stomach, or it will produce diarrhœa. There is a variety of good preparations to be found, which sometimes answer our purpose admirably, and at other times completely fail, but the preparation which I have always found most agreeable to the palate and the stomach, and also most reliable in its therapeutic effect, is Hagee's Cordial of Codliver Oil Compound. To the adult it may be given early and late in this disease three or four times a day in tablespoonful doses. In children, proportionately to the age. A persevering use of this remedy in connection with the other above mentioned requirements will save many valuable lives.—K. C. Med. Lancet-Index.

Medical Miscellany.

SECRET OF THE NERVES FOUND. At the recent annual meeting of the American Physiological Society in Chicago, Dr. Albert F. Mathews, professor of physiological chemistry in the University of Chicago, announced to that learned assembly what his colleague, the eminent Prof. Jacques Loeb says is the most nearly fundamental physiological generalization in fifty years. In his announcement he claims to have discovered the secret of nerve and muscle stimulus, together with the manner in which nerve impulses are carried from part to part of the body and that in which muscles contract and expand in response to these impulses. This involves the rhythmic beat of the heart and the entire matter of anethesia. This is a brief summary of the discovery drawn up by Dr. Mathews:

First—Motor nerves contain or consist of a colloidal solution the colloidal particles of which carry positive electrical charges.

Second—Nerve-protoplasm is stimulated by the passage of the colloidal particles from a condition of a solution to that of gelation, or jellying.

Third—This change is brought about by the action of ions, electrically charged atoms or groups of atoms, which bear negative charges. The stimulating action of any chemical compound depends on these negative charges. These ions (anions) having one charge, are less efficient than those with two or three. In other words, the stimulating action of any ion is proportional to the number of negative charges it bears.

Fourth—The colloidal particles of the nerves are held in solution by positively charged ions, sodium, potassium, calcium, hydrogen, etc., and the effectiveness of these ions in preventing stimulation varies directly with the number of positive charges they bear. A one-charged ion, such as sodium, is less poisonous than a three-charged, such as iron.

Fifth—By these facts chemical stimulation is shown to be identical with electrical. Whenever in any part of a nerve negative charges are in excess the nerve is stimulated, that is, the colloids pass from a solution to a jelly. The stimulus always arises at the kathode or negative electrode.

Sixth—The irritability of a nerve is diminished whenever the solution of the colloids is rendered more permanent. It increases as the nerve approaches the gelation state. All positively charged ions thus diminish irritability, negative increases it. This explains electrotonus, as the irritability of the nerve is increased near the kathode and reduced at the anode.

Seventh—Heat diminishes the irritability of the nerve by rendering the solution more stable; cold increases it by rendering it less stable. At high temperatures gelation takes place and the nerve is stimulated.

Eighth—The nerve is stimulated mechanically because the colloidal particles are forced together. As they coalesce their surface becomes less. Less positive charges can reside on it and part of the negative charges previously induced in the surrounding water are set free and immediately precipitate the next group of colloids.

Ninth—These in their turn set free negatives which precipitate the next group, and so the nerve impulse is carried. Technically these negative changes are called the negative variation, and this stimulates each successive element of the nerve.

Tenth—Anesthetics all dissolve fat. They reduce the irritability of the nerve or protoplasm because the colloids in the nerve are largely fat compounds and more soluble in a mixture of ether and water than in water alone. All anesthetics render the colloidal solution more permanent and prevent gelation.

Eleventh—Besides the number of electrical charges in the ions there is some other factor which determines the action of salts. Thus potassium is more effective in reducing irritability than sodium; fluorine is far more effective as a stimulant than chlorine, although all carry only a single charge. It is believed that this difference of efficiency in monovalent anions or kations is dependent upon the rate of rotation of the electron or the positive or negative point-charge about the atom with which it is associated. The electron rotates about the fluorine atom about twice as fast as about the chlorine atom.

Twelfth—The stimulating action of any anion or the poisonous action of any kation is hence a function, first of the number of charges rotating about the atom; second of the rate of rotation of these charges, and third of the circumference of their orbits.

Thirteenth—Chemical stimulation is thus, by the electro-magnetic theory of light, shown to be identical with stimulation by light waves. The stimulating action of any anion increases as the spectrum of that anion approaches the ultra-violet.

Fourteenth—The long light waves and heat waves are in their action like those of the positively charged ions.—The Jeffersonian.

SEBORRHEA. The methods hitherto employed for the removal of the crusts of seborrhea sicca have been either alkalies, by which the crust is more or less saponified, or, more usually, oils of one sort or another whereby they are liquified. Neither of these methods is very satisfactory. As the crust is composed chiefly of fat, it was thought that a solvent might act better, and benzene suggested itself. The first patient it was tried on was a young man aged 25. He was getting very bald, and had a thick crust of seborrhea sicca. It was applied with a shaving brush, and the whole thing disappeared in about two minutes. The benzene leaves the hair and scalp very dry, and inunctions must follow. For this, bay rum and castor oil, of each, one and one-half ounces, tr canth., two drachms aq., coloniae, one-half ounce, may be used every morning, and the benzene be repeated about once in five days. For mild cases of seborrhea-oleosa type, the benzene may be combined with an equal quantity of rectified spirits. No hairs are broken off in the removal of the crust. A considerable number of cases have been successfully treated in this way.—R. W. Leftwich, Brit. Med. Jour.

THE CONNECTION BETWEEN OCULAR AND DENTAL AFFECTIONS. Despagnet, Paris (Recuil d' Ophthalmologie), says ophthalmologists are probably recognizing more and more the real connection existing between dental and ocular diseases. The anatomical relations between the two are so intimately connected that it is apparent that diseased teeth should produce similarly conditioned eyes. The periosteum, which lines the orbital cavity, ex- jaw; the mucous membrane of the tends to the alveola border of the upper mouth is in direct continuation with the conjunctiva. Many times the roots of the upper teeth extend directly into the antrum of Highmore, and from this situation disease frequently reaches the orbit through the thin partition of bone. The angular artery and certain veins run almost directly from one region to the other. The same general nerve supply reaches both, not only through the fifth pair, but also through the sympathetic system. Amblyopia, he believes, of which he cites a case, amaurosis, corneal ulcers and inflammations in general, various forms of conjunctivitis, strabismus, cycloplegia, and in fact troubles of almost every portion of the ocular apparatus, have been at times clearly traced to the teeth. Usually it is the upper teeth that require attention in these cases, but not always, as the lower ones are not infrequently to blame.—Annals of Ophth.

VACCINATION. We believe that carelessness is a mild term to apply to some of the things concerning vaccination. Thus, we are told that certain vaccinators have performed this little operation on no less than 300 persons in a single day. Think of that! Can it be true? Say the physician works sixteen hours without a minute's rest. He would vaccinate about one patient every three minutes. To say that good work can be done in such express time is bosh.

To vaccinate properly and safely, the following should be the routine:

1.—Scrub the arm thoroughly without antiseptics. The latter interfere with the success of the vaccine.

2.—Scarify with an instrument known to be aseptic.

3.—Wipe off with aseptic materials the blood and epithelial debris produced by the scarification.

4.—Apply the virus.

5.—Use a shield only to enable the patient to leave the office without waiting for the wound to dry. Intruct him to remove it the following day. Shields are in reality dirty things. They retain secretions and collect dirt.

6.—In their place use as a subsequent dressing an aseptic dry compress, which should be changed from time to time according to the indications afforded by other surgical lesions presenting like physical conditions.

7.—After the constitutional symptoms of vaccinia have subsided, and if the wound is not progressing favorably, it is permissible to make use of antiseptic dressings, though the latter had better be avoided, unless the indications for their use are well defined.

8.—Instruct patients that vaccination wounds require the same care as that of surgical lesions in general.—Editorial in The Hahnemannian Monthly.

A large number of Chicago physicians who have tired of paying the exorbitant rentals of the down-town office buildings, have clubbed together and will erect a skyscraper to be owned by doctors, built for and used by doctors. It will have fine laboratories, operating rooms and every convenience that the physician's heart could desire.—Chicago Clinic.

In the Post-Graduate for March appears a paper read by Dr. Henry Beaman Douglas before the New York Post-Graduate Clinical society on the subject of "Drug Treatment of Catarrh," which is rather exhaustive of the subject. In the discussion Prof. Rose called attention to the important use of carbonic acid gas in the treatment especially of acute rhinitis. For the application of the gas he recommends a very simple apparatus. A pint bottle with a large mouth is provided in which is a rubber stopper into which is fitted a glass tube over which a rubber tube extends to an ordinary nozzle. The solution used is about six drachms of bicarbonate of soda in about four ounces of water into which is dropped four drachms of crystallized tartaric acid. The stopper is quickly inserted when the gas is applied directly to the mucous membrane. Gas develops during about 10 or 12 minutes.

EXCLUSIVE SOUP DIET AND RECTAL IRRIGATIONS IN TYPHOID FEVER. Seibert (Arch. of Ped.) has obtained the following result by pursuing the above regimen:

1. Delirium, headache, insomnia, nausea, vomiting, and tympanites usually disappear within forty-eight hours of treatment.

2. Tympanites, nausea and vomiting never develop in any patient, even when complicating pneumonia was present.

4. Appetite came frequently on the fourth day of treatment, even when the thermometer registered 102° and 103° F.

5. Even excessive diarrhoea (fifteen to twenty-five daily stools) disappears invariably within first week of treatment.

6. In all uncomplicated cases the temperature began to decline within twenty-four to forty-eight hours after the beginning of treatment, and invariably would reach the normal figure within ten or twelve days.

7. In cases complicated by pneumonia, nephritis or phlebitis, when treatment began the temperature usually remained in accord with the inflammatory conditions found until these also disappeared, while the cerebral, gastric and intestinal disturbances usually subsided as rapidly as in the uncomplicated cases, excepting anorexia.

8. Complications, when not present at the start, were very rare, and then usually developed within the first two days.

9. Intestinal hemorrhage was noticed in three cases, none ending fatally. Perforation did not occur.

SCHOOL SANITATION. Expert opinion on school sanitation may be given as follows:

(a) School buildings should not be more than two stories high.

(b) All school rooms should contain certain air space equal to 250 cubic feet per pupil.

(c) All school rooms should contain floor space equal to 20 square feet for each pupil.

(d) The square feet of window surface should be at least one-fifth of the square feet of floor surface.

(e) No pupil should be seated farther away from the window than one-half times the distance from the top of the window to the floor.

(f) No school room should be heated by direct radiation.

(g) Air from the outside should always be used to furnish fresh air for the rooms.

(h) Quantities of fresh air moderately warm should be furnished, and in no case should fresh air be heated to high temperature, because it is thereby vitiated.

(i) Pupils should be furnished at least 30 cubic feet of air per minute.—D. Forsythe, Dominion Med. Monthly.

PRECAUTIONS AGAINST TYPHOID. The Prussian state railway authorities are at last aroused to the gross neglect of sanitary rules prevalent all over the continent.

So alarming has the spread of typhoid fever become that every railway terminus is to be turned into a quarantine station. Scrupulous cleanliness is ordered at all the stations, a reform whose urgency American travelers abroad deeply appreciate.

Freshly boiled water is to be ready for imperiled passengers and crews, the fountains of ordinary drinking water to be sealed up. Sterilized water for public use is to be on tap in tanks conspicuously so designated. A physician is to accompany every through train to watch for symptoms of disease and to keep himself informed upon health questions throughout the route.

There is no doubt that passenger coaches and railway stations are fertile disseminators of disease in every part of the globe. In the United States the sanitary regulations in transit are better than those in any part of Europe, but sometimes they are not rigorous enough.

Filthy people, as well as clean people, travel. The dangerous contact which is impossible in homes is compulsory on trains. The train management is often lax in relation to canons of cleanliness, especially on coaches running long distances.

There ought to be more liberal use of water, and a freer application of disinfectants is among the necessities of railway cleanliness, particularly where sleepers are part of the train.

More attention should be paid to ventilation and to a proper removal of microbe-charged dust, which the porter, as a rule, instead of wiping up, merely diffuses by brushing.—Chicago Chronicle.

THE "NORMAL SALT SOLUTION." There is some variation in the formula given by the different writers. Dr. Charles A. L. Reed, in his new Text-book of Gynecology, remarks that Lock has suggested the following formula, and reported favorably upon it:

℞. Calcium chloride	gr. iij¾
Potassium chloride	gr. jss
Sodium chloride	ʒ ijss
Aqua dest	q. s. ad. Oij
M.	

The solution may be injected subcutaneously into the intestine, or into a vein. —New York Med. Jour.

SURGERY OF SPINA BIFIDA. Dr. Van Buren Knott, Sioux City, concludes in Western Medical Review, March 15, 1902:

1. Owing to the distressing nature of the affection the high mortality should not prevent attempts at surgical relief.

2. Meningoceles, meningomyeloceles, and syringomyeloceles may be considerably benefitted by operation.

3. The improvement in function cannot with certainty be estimated before operation, and pronounced evidences of nervous disturbance are not a contrain-

4. Asepsis is absolutely essential, and dication to excision. though difficult to secure may be maintained by exercising extreme care.

5. The plan of having the suture lines of the meninges and the overlying tissues on different planes will in the majority of instances prevent leakage of cerebrospinal fluid.

6. The suggestion of Pearson to prevent the escape of this fluid during a prolonged operation by stuffing the canal with gauze is valuable.

7. Large bony defects may be effectually closed by muscle much easier than by osteoplastic methods.

8. It is not necessary to keep the child off its back during the healing of the wound as freqently advised.

9. Children with hydrocephalus accompanying spina bifida should not be subjected to operation.

GENIUS AND INSANITY. The law of compensation is quite generally considered to be universally applicable in nature's way of doing things, by those who seek to prove that law governs all. If we could eliminate the vital principle or that dependent upon other than material being, and we are not all materialists as yet, then the problem would be an easy one to solve. So long as we admit that freedom is an attribute of mind or of life, then the law of compensation must fail. Some discussion has been excited of late by the stand taken by several eminent neurologists that genius is the manifestation of defective or diseased brains. They claim that overdevelopment in one organ must be accompanied by a lack of development in one or more other organs. This view would probably be a correct one if we all started out in life with equal endowments in the aggregate, both mental and physical. Unfortunately for many of us, though probably fortunately for the race, this hypothesis is untenable. A long list of names garnered from both ancient and modern history is brought forward to prove by example their position. Perhaps the class of religious enthusiasts that bore such a prominent share in the history of Europe two centuries ago is most frequently alluded to. They forget, however, that religion itself appeals to the emotions rather than to the intellect, and that intensely emotional natures are most apt to become disordered mentally. Martin Luther and Savonarola may have been insane, but that fact proves nothing. Unless genius be confined to its emotional phases, such as religion, music, poetry, etc., there can be no necessary relation between the two.

The word "genius" itself is as indefinite as the term "insanity." Its ordinary signification is a special or unusual natural aptitude for doing a certain line of work, generally mental. This of course presupposes an unusual development of the brain center presiding over the function exercised. If all men were endowed with a like amount of mental energy, then in the genius some other part of the brain must inevitably suffer. But so long as we are ushered into this world with varying amounts of mental force it would be idle to assume that a piling up, as it were, of mental energy in a certain locality or bump must necessarily mean a deficiency at other points. The same genius, however, must possess an abnormal amount of mental force, in toto, to escape being deficient in his weaker points. If he possess this he may be stronger in his weak points than the ordinary individual in his strong ones. It is largely a question of the individual.—Western Med. Review.

SERUM AGAINST SNAKE-BITE.

Dr. Calmette, director of the Pasteur Institute, at Lille, has shown the resemblance between the poison secreted by the salivary glands of snakes and the poison of such diseases as plague or diphtheria, and that seropathic treatment is applicable to snake-bites with even greater success. The snake venom is extracted by pressing the jaw, and after being dried a 1 per cent solution in salt water is prepared. Rabbits and other animals inoculated with increasing doses of this become immune to doses 200 times greater than a mortal dose. A horse after six months' immunization can stand venom enough to kill 200 horses not treated. Immunized horses furnish the antitoxic serum for inoculaing against snake-bites, and six to eight liters of blood, yielding two to three liters of active serum can be drawn from them every two or three weeks. The immunizing of the horse must, however, be repeated after a time. Ten to 20 cc. of the serum injected under the skin of the abdomen, where it is readily absorbed, will prove efficacious, if the patient is not yet in a state of asphyxia. In India, where more than 20,000 persons die annually from snake-bite, this serum would no doubt prove a valuable life-saving agent, if there only could be some one at hand to inject the serum as soon as a poor native is bitten. Unfortunately, nearly all die hours before aid can be summoned.—American Medicine.

It is announced that a million-dollar hospital will be erected this summer overlooking Lincoln park, Chicago.

PHYSIOLOGICAL CURE OF THE MORPHINE HABIT. Jennings, (London Lancet, No. 4067), in describing this condition in 1890, declares that up to that time no treatment of the craving existed founded upon therapeutic indications. The usual way of dealing with the patients was to withdraw the drug either suddenly or gradually. As a result many of the unfortunate died, some committed suicide, and the rest, after intense suffering, again fell victims to the drug.

He found that the misery and wretchedness of the habitue were always intensified by certain dietetic and hygienic errors that he usually commits and that could easily be avoided. During the next ten years the observations accumulated and strengthened this view, and the author now states confidently that the morphine habit can often be prevented and cured, provided the proper line of conduct is strictly followed and provided also that a cure is really desired by the patient. This is often not the case in those presenting themselves for treatment under pressure from relatives, etc. Such a habitue will invaribly relapse as soon as his sufferings are alleviated.

There is a class of patients who desire to be cured and who even have no real craving, but suffer from an "hysterical neuromimetic craving." Great tact and caution are required in treating these cases. They should never know how much morphine they are taking; otherwise, if they hear of a reduction, distressing symptoms appear.

Supposing that we have a patient who is sincere in his desire to be cured; the first step for him to take is to renounce all liberty of action and to surrender his syringe and solution. Should the morphine be associated with another drug, the latter—which is generally a stimulant—must be suppressed at once. Alcohol or cocaine can be easily stopped, for as a matter of fact the morphine acts more strongly when the antidotal stimulant is withdrawn.

Dr. Jennings thinks is is possible to wean the habitue by a sufficiently slow and gradual reduction without any other treatment. Of course it is necessary to individualize. The reduction must be slow enough to cause no distress.

However, other measures are at our disposal, and with docile patients a cure may sometimes be effected in ten days or two weeks. It is advisable to change the mode of exhibiting the drug as soon as possible. The rectal injection should be substituted for the hypodermic from the moment the patient is reduced to 2 gr. by the skin. Two grains seem to be the vital requirement. This quantity is absorbed; any surplus may be detected in the urine. As a rule, it is not possible to descend below 2 grn. without causing distress, and at this juncture the rectal administration should be resorted to, and double the dose given. Though 4 grn. will thus be taken, a great point is gained—the patient has renounced his syringe. The syringe is used on the slightest pretext; the rectal injection is an altogether different and troublesome affair. There is no sudden stimulation derived; the effect is gradual, the procedure inconvenient, and possesses none of the elegance and fascination of the syringe.

It is now that the appearance of any abstinence of symptoms must be prevented, while a gradual reduction of the rectal doses is going on. Among the phenomena of vital depression following the suppression of the habitual stimulant, heart-weakness is prominent. Therefore, cardiac tonics are indicated in combating the craving for morphine. By overcoming the sluggish heart action, the necessity for the stimulant is considerably lessened. Sparteine has shown itself most reliable in the author's hands as a cardiac tonic.

Another important factor is the hyperacidity of the stomach and organism, this suggesting the administration of sodium bicarbonate. The bicarbonate relieves the craving in so far as it is caused by hyperacidity, and this is not to be underrated.

The third of the author's therapeutic measures is the hot-air bath. He does not claim any extravagant value for this measure, as others have done who advocated it as a specific; but employed in combination with the other remedies mentioned, the bath is certainly productive of good results. These are largely due to the tonic and sedative influence of the procedure.

A moderate and non-alcoholic regime is insisted upon, and occasionally a hypnotic is administered, as the case may require.

The oft-repeated statement that a periodical revival of the craving assails the cured habitue is denied by the author. If the treatment has been properly carried out, restoration of health will follow. The patients rapidly gain in weight and a general physical recuperation takes place.

The ex-habitue is advised to indulge in active exercise, to take regularly Turkish baths, and in every way strive to keep up and promote the tone of his system. In this manner the after-cravings will be effectually prevented.

He reports in detail several cases in support of the soundness of his position. —Charlotte Med. Jour.

Book Notices.

MANUAL OF CHILD-BED NURSING, with Notes on Infant Feeding. By Charles Jewett, A. M., M. D., Sc. D., Professor of Obstetrics and Diseases of Women in the Long Island College Hospital. Fifth Edition. Revised and Enlarged. New York City: E. B. Treat & Company, 241-243 W. 23d St., 1902. Price 80 cents.

This little volume was originally prepared for the Training School for Nurses at the Long Island College Hospital, but on account of its great service there it was finally revised for general use, not only for nurses in general but for mothers as well, and there being such a demand for it the book has passed to its fifth edition. It is not a text book, but is intended to convey the salient teachings of hospital training in plain language so that all may readily understand.

INTERNATIONAL MEDICAL ANNUAL: A Year Book of Treatment and Practitioner's Index. By Thirty-six Eminent Medical Writers in all Departments of Medicine. Nineteen Hundred Two: Twentieth Year. New York City: E. B. Treat & Co., 241-243 West 23d street; Chicago: 199 Clark street. Price $3.00.

A score of years ago there was scarcely a demand for specific details of operations that came within the circumscribed domain of the specialist, but today there is intense interest manifested among practitioners not only in the great city but in the wayside hamlet as well, and any book that will record the advances made in all lines of medical or surgical practice from year to year will be cordially received. The Treats furnish such a concisely arranged epitome of the annual progress of the science of medicine that no physician who wishes to be strictly up-to-date can well afford to refuse to add a copy to his library as soon as the printers can supply it for his use.

The present volume is handsomely printed and illustrated, as usual, and the subjects treated are fairly exhaustive in scope.

MEDICAL DIAL

A Monthly Record of Medicine and Surgery

Published by MEDICAL DIAL COMPANY

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SUBSCRIPTION PRICE

United States, Canada and Mexico, per annum, in advance,	$1.00
Foreign Countries in the Postal Union, per annum, in advance,	1.50

N. B. Matter for the reading pages should reach office of publication on the 20th of the preceding month and display advertising on the 25th, to insure attention.

Vol. IV MINNEAPOLIS, MINN., JUNE, 1902 No. 6

ACCOMMODATIONS FOR THE INSANE. The need of greater accommodations for the care of the insane is felt in Canada as well as generally in the United States. The mayor of Toronto has lately taken an interest in the subject, and wrote the Local Council of Women his opinion as follows: "The government of the Province has been constantly behind its duty in the matter of providing accommodations for the insane, and is particularly wanting in its excuse since the succession duty tax has been levied bringing in very large sums. The continued detention of lunatics in places not intended for their custody is a crying and cruel evil. The statement that some cases of this kind have been in jail for years is a startling one, the evidence of which will certainly form a subject of serious pressure upon the provincial government."

The above communication exposes a neglect of a "plain duty" by the members of the House Legislature, and it is a matter of surprise that the medical members of the House should remain quiet under such complaints, and especially when there are ample funds provided by special tax for their use.

There are similar demands for "more room" for the insane made in all the hospital reports in the United States from year to year. Some states have recognized their duty and have partially, if not completely, complied with the necessity. Minnesota, from its admission to the Union as a state, has been generous in its provision for this class of its population; in fact for years it has been an asylum of easy access for individuals of small claim to its care. No other state has been more liberal in its provision for the unfortunate and insane and in preventing their detention in the jails and almshouses. Since 1879 the state has assumed all the expenses of those committed to the hospitals for insane without regard to their pecuniary condition; and this policy is both wise and economical. Early treatment of these cases is most effectual, and the restoration of the afflicted in the shortest possible time to their homes and ordinary business save many from becoming chronic, incurable, and helpless inmates, a permanent con-postoffice department of the United sumer of their own means, or dependent upon the charity of friends or the state. Under this system of care there is no delay of commitment for pecuniary reasons, nor time wasted, hoping for some favorable change, that may result in disastrous consequences to the patient. Occasionally some one is heard protesting against this generosity towards those who may have some private means of support; but such a person does not consider the matter in its broadest and most humane light. The man of means has contributed his part in building and maintaining these hospitals, and if overtaken himself by disease, or one of his family, in the form of mental disturbance, he is as worthy of treatment, free of exepense, as the party who has not contributed anything and has, perhaps, only gained a legal residence in a lucid interval of sanity of short duration; under these circumstances should not the institutions for their relief be considered in the light of health insurance companies, in which all the people of the state are interested? It is true the expenses appear large, and without admitting that insanity is on the increase, that is, that there are more new cases in proportion to the population than formerly, the cost of support must necessarily increase from the rapid growth in numbers by native and foreign additions, and yet how small is the individual tax when the whole sum is divided among the inhabitants of the state? Aside from the aid contributed by the railroad corporations a tax of twenty-five cents for each person would yield four hundred thousand dolars per annum; a few less bon bons for the children, and a few less cigars for the adults and the expense is met and no one has suffered. Let us have no backward step taken in the treatment of the insane in Minnesota by a return to a system of private boarders, or of a county support.

RESOLUTIONS AGAINST MEDICAL (?) ADVERTISING. We are glad to note the hearty seconding of the Medical Dial in its strictures on the conduct of many of the leading dailies of the country in permitting so-called medical advertising, and particularly against the small advertisements which appear in the personal columns setting forth the merits of many nostrums said to be absolutely certain in preventing the natural results of conception.

The Kansas City Academy of Medicine, at its meeting in April, passed a set of resolutions on the subject, after listening to a paper by Dr. John W. Kyger on "The Decadence of the American Race," as follows:

Whereas, without a special effort to investigate it must have been observed by the most indifferent with what flagrant violation of all sense of delicacy the public press gives place to advertisements of nostrums and means intended to prevent or cut out pregnancy; these advertisements appearing in a column of the paper set apart for such purposes under the name of "Personal Medical Advertisement," and referred to as "Guarantees," "Sure Relief," "Sure Prevention," etc., occupying in some Sunday editions of reputable papers as much as two columns, destined to fall into the hands of all classes, and

Whereas, we recognize the press as a most potent factor in the education of the masses, be it

Resolved, by the Academy of Medicine of Kansas City, Mo., that we respectfully recommend that a censorship over the public press should be exercised to the end of correcting such practice of publishing advertisements as those referred to in our whereases. Be it further

Resolved, that it should be deemed of sufficient moment for the attention of the

States of America restricting or prohibiting the distribution of such papers, periodicals or magazines through the United States mail if they continue to so prostitute their columns with such matter.

These resolutions are being sent to all the state medical associations.

TO THE MEDICAL PROFESSION OF THE UNITED STATES: The necessity for a thorough organization of the medical profession was never more urgent than at the present moment, nor has the appreciation of this necessity ever been more keenly felt than at this time.

The American Medical Association, which will hold its fifty-third annual session at Saratoga on June 10, 1902, being the only national representative association of the medical profession in the United States, is entitled to and claims the earnest support of every medical practitioner who has at heart the highest and best interests of the profession. An organized profession represented in this great central body with affiliated and influential state and territorial associations extending through their subdivisions into all the districts or counties, is the only real guarantee of the protection of the public health and of the medical profession. The enactment and enforcement of rigid medical laws; the establishment of reciprocity or interstate comity by which a uniform standard of requirements for the practice of medicine in the various states, which without any sacrifice of the very highest requirements, would permit a physician, having gone before a competent board in one state, to practice in another without being subjected to a second examination; the establishment of a national department of public health; the support of the medical staff of the United States army in their efforts to maintain their rights; to prevent unjust restrictions upon animal experimentation which has proved to be one of the most important methods of research and of the most lasting benefit to humanity, can be accomplished in no other way than by thorough organization of the profession in the American Medical Association.

JOHN A. WYETH, M. D.,
President.

NEXT SESSION OF AMERICAN MEDICAL ASSOCIATION. Saratoga is an ideal spot for such a large gathering as the coming session promises to be. The hotel accommodation is more than ample and all who attend can be cared for without crowding or inconvenience. The places in which to hold the section meetings will be found satisfactory. Above all, the hotels and meeting-places are all near to one another, and three minutes' walk will reach the extreme points.

The programs show that, from a scientific point of view at least, the Saratoga meeting will be a decided success. They indicate that the best men in the profession of this country will be heard, as well as some from abroad. The ophthalmologic section is to be congratulated on having secured Professor Haab of Zurich to read a paper before that section.

The coming meeting will be the first under the reorganization. The House of Delegates will relieve the general meetings of the legislative functions, and, as these general meetings—except the first and last—will be held in the evening, they will not interfere with the morning meetings of the sections, thus giving more time for scientific work. We look for a marked increase in the value of the papers and discussions and consider that it will be largely owing to this fact. Indeed, the section meetings should decidedly gain in interest from this time on if the increased opportunities are duly utilized and thereby the reputation of the Association as a scientific body will be enhanced. The social features, which are an important side issue in meetings of this kind, will also encroach less upon the regular work without being themselves neglected.

It is worth bearing in mind that this first meeting of the House of Delegates will be an innovation on all previous assemblies of the kind as giving the example of a truly representative body in the medical profession. It is not for this reason in any respect a doubtful experiment; on the other hand, it is only the realization of a long-needed reform, but none the less unique even in this respect. We believe that the coming session, as did the last meeting, in which the reorganization was effected, will take its prominent place among the landmarks of the Association.—J. A. M. A.

ITEMS.

The American Climatological Association will hold its nineteenth annual meeting in Los Angeles, June 9 to 11.

Dr. S. A. Brown, of Sioux Falls, S. D., has furnished the Medical Dial with an excellent article on "Uterine Drainage," too late for this issue, but it will appear in the July number.

The Minnesota State Medical Society will meet in Minneapolis June 18 to 20 inclusive.

The twenty-eighth annual session of the Mississippi Valley Medical Association will occur in Kansas City, October 15 to 17.

The Association of American Medical Colleges will meet in Saratoga, June 9, at 10 a. m.

The fourth annual session of the American Proctologic Society will occur in Saratoga, June 10 and 11.

Harvard will erect a new Dental School building to cost $300,000.

Dr. Olaf K. Krogstad, formerly of Sacred Heart, Minn., has removed to Minneapolis, and is now associated with Dr. Falk Tennison, at 1921 Washington avenue north.

The board of regents of the University of Iowa has decided to erect a $200,000 Medical building on property given by the citizens of Iowa City, the pretty little city where the University is located.

The American Academy of Medicine will hold its annual meeting in Saratoga, June 7th to 9th, inclusive.

The American Medical Association will meet in Saratoga, June 10 to 13, inclusive.

The American Orthopedic Association will meet in Philadelphia, June 5 to 7, inclusive.

Dr. Asa W. Daniels, the very highly respected and veteran practitioner of St. Peter, Minn., was recently presented with a valuable silver loving cup by his friends, the citizens of St. Peter, on his return from a four months' sojourn on the Pacific coast.

Prevention of Typhoid Fever.

By J. R. Etter, M. D., Crawfordsville, Ind.

The journals teem with articles on "The Treatment of Typhoid Fever," which are all very good in their way; but I wish to call attention again, as I have in several articles in the past, to a better way—prevent the disease.

About seven years ago I made a short talk before the Medical Society at Little Rock, Ark., in which I set forth my views, backed up by more than twenty years' experience, stating that during my whole professional life I had never had a case of typhoid fever in my own practice. Well, it was real funny to see the Society, almost to a man, ready to spring upon me as though my talk was a menace to suffering humanity—or to their pocket-books—I never clearly understood which. But in about a year thereafter I had a request from one of the irate individuals, asking me to furnish him my treatment in full. And Little Rock was not the only place that I had similar experiences, yet I go on in my tranquil way, and never allow a patient to drift into this fever. I speak advisedly when I say "drift," because it is not typhoid when it begins, but simply a torpid condition of secretory and excretory systems. All the train of symptoms that follow are purely those of auto-infection. We often see long articles regarding filthy sewers in cities, citing the great menace they are to the health of its inhabitants, and thousands of dollars are spent in flushing them out. In the human body there are about twenty-five feet of sewer—more I ween, than there is of public sewer to each inhabitant in any city, and it becomes as filthy and dangerous to health as any public sewer—yea, being inside the body, instead of in the street, and in absolute contact with the absorbent system, it is many times more dangerous. The excretions from a typhoid patient are said to be very dangerous to the attendants, to those residing in the same house, and even in the same block. If this be true, is it any wonder that the patient is sick when this deadly poison is slowly filtering through his system?

It seems to me that I have already clearly indicated the treatment—clean out and disinfect the human sewer. It is very probable that the various secretions normally discharged into the alimentary canal have much to do with the disinfecting and purifying of its contents. Thus, the first symptoms we have are those pointing to lack of funtional activity in the organs charged with this important duty. The coated tongue, foul breath, loss of appetite, torpid bowels, etc., all point in this one direction. Next we have the languor, rise of temperature, occasional cold spells, all of which point to slow poisoning. If the poison in the intestinal tract is not sufficient to partially paralyze the muscular coat, still causing constipation, we next have diarrhea, and is it any wonder that such a substance in contact with the delicate mucous membrane would cause sufficient irritation to stimulate the bowel to get rid of it? Finally we have inflammation and ulceration of the solitary and Peyers glands. Could we expect anything else when we remember that these glands are bathed for days with a substance that would surely cause ulceration of even the skin, that even the odor arising from it is dangerous to the community. The disease is not originally typhoid fever, and it is only by unskillfulness of the physician that it so becomes.

A few words as to treatment and I am done. When the prodromic symptoms first appear, begin your treatment and don't wait, as a large number of physicians I have known, to see whether it is going to be typhoid fever or not. The proper remedies are such as are addressed to torpid secretions, clearing out and disinfecting the alimentary canal. When these objects are attained you will never, never, have typhoid fever, and don't forget it. I have found mercury to be the best single remedy that can be used. It stimulates the secretory organs, and is our most powerful germicide. In my early practice I gave large doses of calomel in these cases, but of later years I think better results can be obtained by small doses often and continuously repeated until the desired result is obtained, which is known by the feces becoming almost a jet black—never stop this part of the treatment until you have the above characteristic stools if you expect to—I was going to say abort typhoid fever, but I will say avoid it. But, even in the midst of the disease, it can be materially cut short by this plan of treatment and, contrary to general teachings, without the least danger to the patient, or of causing hemorrhage. I have carried out this plan of treatment, when called in cases that had been going on for two and three weeks, and never caused any hemorrhage or other bad symptoms; but, on the other hand, have seen the patients improved within a day or two. It is wonderful the amount of refuse that will gather in the intestines, even though the patient is eating nothing at all, and in those cases the odor will be terrific. It is not the large number of discharges that is desired, but it is the size and characteristic color. I have generally found that the first few doses given will act apparently very freely on the bowels; but, if continued, you will eventually have to give oil, salts, or some other preparation to get a free action. Sometimes the actions will be so often as to make it necessary to give some checking preparation for a while, in conjunction with the eliminant. As said before, it is not the number of actions, but the character that is to be the guide. Sometimes I give tablets containing calomel ¼ gr., podophyllin 1-12 gr. every hour, especially where the bowels seem to be sluggish; and if, after ten or twelve hours, they do not move the bowels, I give a large dose of castor oil. Then, it the tongue does not begin to clear off and the appetite come up, I begin again with the calomel. Do not stop till you get results. In some cases it may be necessary to give larger doses than here indicated. After the characteristic black discharges have been obtained, a tonic treatment for a few days is all that is needed. There is no reason why any form of disinfectant should not be good in all stages. I often give the sulfo-carbolates, etc., in conjunction with the mercury. The Woodbridge treatment is in the right direction, but he recommends just so many No. 1, No. 2, etc., but gives no rule to go by, as to when you should stop one and begin the other, so a physician is simply an automaton who uses his treatment. Each case must be a law to itself, as to dose, frequency, and length of time administered.

Physicians generally give a cathartic at the beginning of this disease, but, for fear of getting a diarrhea started that they cannot stop, they fail to get the desired result. You will find in those cases that the more you give, especially of mercurials, the less the bowels will move, at least till you get the proper action on the secretions as indicated above. The time to prevent or abort this disease is during the first weeks and at this time there is no ulceration of the glands, and consequently no danger of hemorrhage whatever.—Wis. Med. Rec.

How to Study Sick Children.

By W. C. HOLDOPETER, M. D., Philadelphia.

We begin today our study of pediatrics, or that branch of medicine which deals with the diseases of infancy and childhood. To the young physician who expects to make his success in general medicine pediatrics is of the greatest vital importance; so important is it that a knowledge of the diseases as found in children will frequently be the quickest and surest factor in gaining for the young physician public recognition. His first call may be an emergency summons, and his ability to meet the emergency and relieve the acute suffering of a child will, no doubt, contribute very largely to his subsequent success. You must be strong in resources, careful in your equipment, and thoughtful and conscientious in your endeavors to relieve the sick child. There is one thing I would like to impress upon your minds at the start, and that is that pediatrics is regarded as a difficult branch; but medicine is fraught with many difficulties, even in the treatment of adult patients who have the power of speech, and can direct our attention to the part of thebody which is diseased; in young children who cannot talk you can readily appreciate how much more difficult our work becomes. However, the child has a language of its own, and the practitioners of olden times had a keen appreciation of this and were enabled to make accurate diagnoses by a knowledge of this unspoken language. We must know the language of the sick child, and every disease has a language. We as students are too apt to rely upon our instruments of precision and are too apt to diregard the physiolgnomy of the patient, and the general environment in which the patient is placed. On the other hand, we have certain things in our favor in pediatric practice. We have no pre-existing diseases, as a rule, to eradicate from the child's system. We have no distorted organs due to bad habits or alcoholic excesses; we have to deal with the child uncontaminated.

It is on a basis of a keen appreciation of the import of objective symptoms that the old family doctor excels the scientifically equipped young doctor in making his diagnosis. The old family physician has learned the alphabet which is presented to him by the environment of the child, and with it can spell out the diagnosis which, to an untrained eye, would be veiled in obscurity. Gentlemen, you must carefully study the alphabet of infantile disorders. Instead of depending upon a knowledge of pathology and bacteriology, so necessary in the diagnosis of adult cases, you must study the environments, physiogomy, contour, and general appearance of the child. To illustrate: if upon entering the sick-room you find a child, four or five years of age, who is elevated on the pillows, restless, and breathing heavily, a little thought will reveal to you the fact that the child is suffering either from fever, a weak heart, or some obstruction in the throat or nose; the position tells you this at once. Then, again, you will notice whether the child is sleeping on its side with the head thrown back and legs drawn up, and, if so, meningeal symptoms will immediately suggest themselves to you. Looking at the child's face direct, you learn much from the eyes, nose, and lips, the import of which I will tell you later on.

You will find that the majority of infantile disorders arise from one of two things: heredity or environment. Environment not only includes the habitation of the child, but also the atmosphere in which it lives and the personal hygiene.

The diseases we will be more frequently called upon to treat will be bad feeling, resulting in indigestion and gastro-intestinal catarrh; and yet very little diagnostic recognition will be given to these diseases in detail in the majority of text-books. This leads me to speak very briefly of text-books. It is difficult for me to select a single text-book for your study. Holt is a very careful observer, his picture of disease is accurate, but most of his knowledge has come to him through the dead-room and post-mortem table. He approaches the sick child from the standpoint of the pathologist. Dawson Williams has also written an admirable book upon the subject,—a book which is instructive in every possible way,—and yet he will give you a blurring of the clinical picture of most diseases, as he is an Englishman, and the vast majority of his clinical material comes from the London hospitals and consists largely of rickety and scorbutic children. The poorer children in England are fed on proprietary food, largely live in unhealthy environment, and grow up rickety and scorbutic, and it is quite natural that Dawson William's vast knowledge of children should come from a class not seen so largely in this country. The writer that I specially admire is that pioneer in pediatrics, Dr. A. Jacobi, of New York. The keenness of observation of this writer is phenomenal. He interprets the complexity of symptoms and unravels the most complicated infantile disorders with great skill, and his therapeutics are simple and based on a thorough scientific knowledge. He has done more for this branch than any other man in the world, and his writings are interesting and helpful.

How are we to arrive at a diagnosis in diseases of children? The first thing is to learn as much as you can before you see the child, for, when you see it for the first time, you see it usually under a great disadvantage. When I go into a house I first learn where the child is. If the child is upstairs, I stay downstairs; and, if the child is downstairs, I go into an adjoining room, call the mother or nurse, and have a talk with her first. From her I learn about the child's age and how it was reared; incidentally I take in the environment. Find out how many children there are in the house. Learn how the child is fed. Mothers, as a rule, are very keen observers, and can be of a great deal of help to you and give you many valuable hints. Again, they may often lead you astray and cause you to arrive at erroneous conclusions. You must consider the temperament of the mother before taking her word absolutely. Mothers may be weak and foolish in every other matter, but their opinion of their child is usually correct.

The second step is the inspection of the child, and this is best done when the child is asleep. A sleeping child will tell you a whole volume. If the child is asleep and the eyes are slightly open, you may rest assured that it is sick. If it sleeps with the mouth partly open, it may be due to some engorgement of the nose. The eyes, nose, mouth, color of skin, lines on the face, all reveal a definite knowledge. Count the child's pulse by watching the pulsations of the fontanelle. By inspection, therefore, you will determine the child's pulse, respiration, and condition of the eyes and skin. This observation will allow you to classify the knowledge gained from the mother and allow you to arrive at a correct conclusion.

The third step consists in physical examination. I will not undertake at this time to go into the details of the physical examination of children, as we will take occasion to examine many children before you during the coming session, and it will be my endeavor in each case to explain how we arrive at our conclusions by physical signs.

As regards therapeutics in early childhood, gentlemen, my drugs are very few. I simply make the family rear the child in the proper avenue rather than to drug the child back to health. Not by drugs alone do we cure disease, but by a proper management of the child, improving its environment, and correcting its diet; in short, it is the hygienic rather than the medicinal treatment which gives us the best results.

Case I.—The first case which I desire to call your attention to is one illustrating a common class of ailments in young children, especially in those reared by careless mothers. It is one of those cases in which the recognition of the cause and its removal will be rewarded by a speedy recovery, and add much to your reputation in the community in which you reside. Its history is as follows: C. D., 6 weeks old.

Family History.—Father and mother both living and well. History of syphilis, tuberculosis, and rheumatism negative. One sister living and well. Delivered with instruments and had monoplegia of right arm, which recovered. Mother had had no miscarriages or still-births.

Present History.—Breast-fed every hour to quiet the child. Present illness began three weeks ago as a rash involving the entire face and scalp, buttocks and limbs. Eruption of intense fiery-red color, surrounded by yellowish scales, accompanied by intense itching. The child is restless, cries a great deal, sleep is disturbed, abdomen is tympanitic. Bowels loose; fæces foul, green, and contain much mucus and undigested milk.

Inspection.—On the head this redness is marked, the nose is inflamed, and the lips are corrugated. This looks like what we find in syphilitis children, but there is no specific history here. The conjunctiva is not involved at all. On the scalp we notice this inflammation is much more decided, inasmuch as the glands of the scalp are much more active and the exudate is gathered there in thick scales or crusts. Passing down over the rest of the body we find an intense redness around the genitals and buttocks. The urine appears to have contributed very largely to this condition here. The abdomen is quite swollen, and this is a point of especial interest, and we must be able to tell whether this is due to a large amount of subcutaneous fat or whether it is pathological.

Palpation.—By rolling up the tissues the wrinkles are small, and therefore the subcutaneous fat is not what is making up the greater bulk of this child's abdomen.

Percussion.—We have here a decidedly tympanitic note high up over the abdomen, and this would indicate that the enlargement of the abdomen is due to distension of the bowel.

Symptoms.—There seems to be no organic disease, but apparently there is a little loss of flesh in the right arm. The child has motion in this arm, however, and can move its fingers. The temperature is normal at present. A case of obstetrical paralysis, and will get well.

Treatment.—This case well illustrates a clas of troubles that you will meet early in your pediatric practice, and the first step you will take will be to regulate the child's diet. It is unusual for a breast-fed child to contract such a bad case of eczema: a result of improper feeding resulting in fermentation. The diagnosis is made first by the condition of the child's buttocks. The acidity of the urine and fæces contribute largely to this child's condition. A child seven weeks old should be nursed regularly ***every two hours*** from 6 a. m. to 10 p. m., but from 10 p. m. to 6 a. m. it should not be nursed more than once. More important even than the regular administration of the nourishment every two hours is the manner in which the child partakes of its meal. The mother should be instructed never to give the child its food unless she is in bodily and mental tranquillity. There are no special restrictions to be placed upon the mother's diet, except that she should partake of a wholesome diet, and avoid stimulating foods. Withdraw any spirituous or malt liquors. The nursing must be carried on every two hours, and you should insist upon the child's taking at least fifteen minutes (twenty minutes would be better) to complete its meal. Gastric irritation in infants is produced by one of two causes: either taking the nourishment too rapidly or taking it irregularly. In this case I have no doubt a very simple therapeusis will bring about a recovery. One of the hardest things the young physician has to deal with is to have the mother observe perfect regularity in nursing. I would start by giving this child a brisk purge, either castor-oil or calomel in 1-10 grain doses, followed by a soda enema, 1 drachm to the pint. The treatment of the skin-lesion is of secondary importance: remove the source of irritation, and the skin-lesion will get well.

The general management of the child and its toilet enter into the question with far greater importance than any local therapeusis. The first step necessary is to contribute to the comfort of the child. There is no doubt that the cutaneous irritation has also contributed very largely to the arrest of digestion, and therefore our first step will be to apply something to the skin which will ease it; so we will apply olive-oil or cosmolin to the affected areas, and follow this up with an alkaline powder, such as talcum or stearate of zinc. This method of protecting the skin will be continued until the gastro-intestinal tract is regulated, when we will find the cutaneous irritation subside.—Med. Bulletin.

What Shall We Do Heredity?

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The bugbear of heredity has long filled the hearts of thoughtful parents with secret uneasiness: it has discouraged the efforts of the teacher: arisen like a spectre before the philanthopist, and served as a barrier to the efforts of the family physician.

One of the most hopeful signs in the world's onward march today, is the way in which science is clearing our vision upon this once dreaded subject. The supposed invulnerable walls of heredity are crumbling before the assaults of modern psychological knowledge, and through the crevices a new light of hope and courage is breaking.

How often have parents stopped in dismay at the sight of an unconscious gesture or expression, a suddenly revealed trait of character, or the sound of an intonation of voice in the child of their mutual love, which brought to their vision painful reminders of the family skeleton? What teacher of maturity is there who has taught more than one generation of a family, who will not speak of what he considers the limits of that child's possibilities? What experienced family physician who does not recognize, from his professional knowledge of the family tendencies, the note of warning which would remain unheeded by the more casual observer?

That these are some of the grave facts in connection with what we know of the trend of heredity, the above factors of society will readily testify, but they are, fortunately, only some of the facts. Today we know that what was supposed to be an invulnerable obstacle to the overcoming of a fault of even vice in a child, the fact that such fault seemed handed down from its parent, is not necessarily so.

Psychology is making clear, what physiology alone has not been able to do, that we can take an inherited mental or physical tendency in a child, and, within certain broad limits, encourage, repress, or even wholly replace it with a substitute that is better.

Working parallel with the laws of heredity, emphasizing and deepening them, and rendering them ultimately inaccessible to any modifying influence,—or, running counter to them, modifying, obliterating or wholly replacing, of equal potency in either direction,—are the laws of suggestion.

Suggestion, whether made to the child by parent or teacher; whether it be as example or precept; whether given unconsciously through environment or, in the failure of such ordinary means through the more forceful channel of hypnotic suggestion, may be said to determine the real destiny of the future man or woman.

By this means there is in many cases opened a field of helpfulness which drugs and medication can neither reach nor influence; without which neither parent nor physician can make any impression; and we have forced upon us the dawning consciousness that the parent and teacher of the future must possess some of the knowledge of the psychologist, and the physician must combine with his training more of that of the teacher.

Paraphrasing an old aphorism, suggestion is the potter's wheel that shapes the plastic clay of the child's mind which, after it has passed through the furnace of oft-repeated habit, acquires the unyielding outlines of character.

Whether our physiological endowments be rich or poor, this and their subsequent possibilities depending upon the vigor and quality of the parent cells, they constitute within themselves poles widely separated by vast continents of physical, intellectual and moral possibilities.

Every one familiar with the breeding of animals and the propabation of plants is constantly brought into contact with this most stubborn of facts,—the infallible tendency to vary. It is alike the hope and despair of the breeder and the horticulturalist, the problem whose variations are kaleidoscopic and marvelously fascinating in their endless possibilities. If we but keep in mind this obvious and most important natural law,—the inherent tendency to vary, and deliberately assume the role of the shaping power, instead of leaving it to circumstance or to the trend of the inherited impulse, we have the mastery of conditions that have otherwise seemed beyond our power.

The new-born infant is only a bundle of instinct,—and instinct is the already-existing impulse that possesses the nervous organism when it comes into postnatal existence. It is the impulse imparted by the molding power of the parent-cells, which can only procreate after their own kind. Instinct, or heredity, is but the sum of the experiences of our innumerable ancestors,—the accumulation of wisdom filtered out of the history of the race. These experiences have always been the result of experiment, for every child born into the world is one of natures's experiments, and for the organism to experiment seems to be an inherent part of the life-principle itself. Were it not for this experimental tendency there could be no law of natural selection, no survival of the fittest, no adaptation to constantly changing surroundings; the individuals of every race of animal and plant life would begin to perish from that hour.

The fallibility of the ordinary conception of heredity must be obvious to every one, since no two individuals of a family are ever alike. They may be somewhat alike, in some things, but the traits of dissimilarity are far in excess. Its tendency and great readiness to vary is the chief characteristic of the organism, and based upon this tendency are all of the child's future possibilities.

With the instinctive or subconscious mind of the infant alone in evidence, we have a blank page eager for impressions, appropriating every one that presents itself with a marvelous assimilative power. The young subconsciousness is possessed of a virgin hunger which grows, unappeasably. All of its surroundings instantly assume the character of the shapers of its own destiny, and in this the most trivial things may have an import as serious as the most great. The senses of touch, of sight, of smell, of sound, of taste, and even the processes of the physiological functions of the body, bathe it constantly in a sea of new sensations. Though these are at first but vaguely appreciated, they establish, through frequent repetition, channels of receptivity that continually become more clearly recognized and finally established.

The budding consciousness must take some shape, since grow it must, but like unto the young leaves of a plant kept in a dark place which grow in the direction of the source of whatever light there may be, it also will grow in the direction of whatever the suggestions of its environment may be, rather than that of any predetermined source of direction behind it. So great, even, is the plasticity of the young consciousness that, as in the case of the young plant, re-shaping may be done again and again. Yet, as time goes on, the parallel between child and plant holding good to the end, the plasticity lessens, the soft cells of the plant becoming hardened and matured into tougher texture, and the nerve-cells of the child set in the direction of the routine they have most frequently performed.

It is in this manner that temperamental peculiarities of the parents are acquired.

Less because they are those of the progenitors of the child, than because they are the peculiarities of those who are constantly surrounding the child,—who thereby establish their own atmosphere for the susceptible infant to grow in.

Heredity is but a transmission of tendencies, a predisposition on the part of tissue and nerve-cells to do things in certain way by reason of ancestral cells having done so before. This way, if unhindered, i. e., if the environment is the same as that of the parents, will most readily repeat itself in the offspring. But it is a way that is at the same time largely capable of being modified, Proteus like, into innumerable forms of human energy, differing, often vastly, from the inherited predisposition.

Neither are the transmitted tendencies always those of the parents, because there exists the tendency to reversion to some other ancestor more remote than the immediate one. There exists also the tendency to vary, to "sport" in the language of the horticulturalist, wherein the individual may prove to be wholly unlike anything that has gone before. The merging of parental tendencies in a child is therefore not always an assured fact, the union often serving as the means of liberation of more remote family peculiarities, or, in conformity with the law of variation, giving a departure entirely new. A common illustration may serve, wherein children of parents gifted with marked musical abilities, are frequently not endowed in like manner, or where a mathematical or an exceedingly practical mind may be the offspring of a union of marked artistic temperaments.

All of our virtues and all of our faults, according to Professor James, are merely habits. "The 'smoking-habit,' the 'drinking-habit,' and the 'swearing-habit,' are no more habits, and no less, than the 'abstention-habit,' the 'moderation-habit,' and the 'courage-habit.' " We are an organized product of habits,—emotional, practical, and intellectual,—and equally of physiological habits,—and all of these are, as the case may be, for our weal or woe. It is but the result of repetition that any act be it of the mind or body, be it normal or abnormal, becomes more and more easy, owing to the plastic nature of our nervous selves. Such acts ultimately repeat themselves without any consciousness at all.

Professor James says that "ninety-nine hundredths of our activity is purely automatic and habitual. From our rising up in the morning to our lying down at night, our dressing and undressing, eating and drinking, greetings and partings, * * * * nay, even most of the forms of our common speech, are things of a type so fixed by repetition as almost to be classed as reflex action." Hence the importance of acquiring as early as possible, as many desirable habits as may be, in order that they be done automatically and without conscious thought.

Society has among its members for too many individuals who represent to a pathological degree, instances wherein even the commonest daily duties of life have to be done consciously. The writer has in mind a middle-aged man who would spend the larger part of a forenoon in an inability to decide whether he should wear black or tan-colored shoes that day. Another instance that of a boy at one time under observation, who could never, at any time, draw on his stockings in the morning without first whistling. Instances of this kind, illustrating the persistence of habits of early defective training, resulting in subsequent disability for practical living, could be multiplied indefinitely.

To the same formative influences that establish our virtues and our vices, we owe the causes that have to do with the deflections of our bodies from the normal. These influences consist of either the hereditary tendency, of environment and unconsciously acquired habit, or of deliberately chosen methods which we call educational, and are usually of all three. They are, in other words, ideas that reach the consciousness and through repetition become established; They become involuntary, automatic, reflex. To the cumulative results of these manifold suggestions we owe a normal mind and body, a well-balanced character, or, their opposites.

The infant that is permitted to put its finger into its mouth, or grasp its mother's ear to keep it quiet, continues to do so from habit, automatically, often long after the years of childhood are past. The child which, in order to sleep, must take its doll to bed, may awaken from sleep in later years and, subconsciously, for the reasoning consciousness knows nothing of this and would not approve, grasps to its breast the corner of the pillow before it can fall asleep again. A gentleman of the writer's acquaintance traveled all over two continents, when a child, with an old piece of fur, the stroking of which was a necessary procedure before sleep could be induced. The child that must thrust its foot forth beyond the bedclothing in order to sleep, possibly in part because of inherited tendency, the parent having done so before, but also because of mimicry, continues to do it into adolescence unless the habit is corrected by conscious suggestion on the part of the parent, or by more forceful hypnotic suggestion. The baby-talk of infancy and childhood is taught by the parent, who emphasizes, enlarges upon and reiterates the imperfect speech until, as is often seen, a mature young man still lisps or cannot pronounce certain words correctly. Habits of stammering and stuttering are acquired in childhood by reason of the withheld suggestive measures, which would have prevented the hesitating speech in its incipiency, from engrafting itself upon a sensitively poised and self-conscious nervous system.

To a much greater degree than in any of the lower animals, mimicry is one of the chief formative agents of the child's habits and character. Psychologists are agreed that man is *the* imitative animal, and to again quote Professor James, "each of us is, what he is, almost exclusively by reason of his imitativeness." The child imitates its parents in the things it sees them do, and practically all of its acquirements are merely copies of the actions, ideas, and aspirations of its parents, of other children, and later on of other people. An expressed dislike of the parent for any given article of food, is imbibed by the child as a suggestion that goes home, and it may for years after continue the unreasoning antipathy. The absence of the wrongful suggestion, or the substitution of the corrective one, would have remedied the fault.

The factor of heredity is in so many cases to blame only in so far as it is a leaning, an *impulse* and a *tendency, it is not an ultimatum.* Tuberculosis and cancer, those great scourges of civilized peoples, are *not* due to inheritance, though long years of helpless ignorance have passed before we could understand. The former can now be cured because we have the knowledge and the courage, and the latter is contagious and not hereditary, and will some day also be obliged to yield because of the inevitable progress of knowledge.

The remedy for faults of manner and of character is already well recognized by progressive teachers; it lies in the skillful substitution of a correct idea for an erroneous one. The principles of suggestion are here already applied. This is the highest form of the teacher's art and is of importance in direct ratio with the youth of the child. But all such corrective training is done by means of the round-about way of the child's waking consciousness. If, however, by means of hypnosis the child's waking consciousness is suspended, there is opened a direct road to its subconscious mind which, after a few repetitions, accepts the corrective statements as facts, never questions them, and they will henceforth become a part of the child's character.

By this means we can cause an untruthful child to become truthful; vicious habits to be replaced by normal and unobjectionable ones; affection and obedience can be substituted for their opposites; dull and stupid children can be brightened; habits of studiousness and mental concentration can be established where they seemed hopelessly absent.

The remedy for faults of the nervous system which manifest themselves in endless forms of imperfect functioning, when not successfully reached by any of the usual methods of medication and hygiene, lies in the like process, in hypnotic suggestion. Suggestion, given in the hypnotic state, may make such impressions upon an imperfectly or abnormally acting nerve-center as to permit the normal function to prevail. It may establish an entirely different "set" to the functioning center, causing new and healthier motor influences to be sent torth.

Children whothe imperfectly nourished and who may be developing a cachexia, and who cannot be made to eat through either coaxing, coercion, or tonics, except under hypnosis suggestions that they are going to be able to eat and to enjoy the needful kinds of food, and in consequence a new impulse towards nutrition is imparted to the organism.

When we give medicine for the purpose of correcting an obstinate bed-wetting habit in a child, we expect, by its action upon the nervous system, to bring about such modifications in its functioning as to correct the difficulty. But sometimes we fail in our results. When we give such a child a few emphatic hypnotic suggestions that the trouble shall no longer occur, we succeed, if there be no organic cause, in so impressing and altering the habit of functioning of that particular nerve-center as to cause the trouble to promptly cease. In such cases we often do succeed with medicine; but when we fail, we are almost sure to succeed with suggestion. We do not know of any direct remedy among drugs for the habit of sleep-walking; we should get at it only by means of the improvement of the general health. Yet, oftentimes one emphatic suggestion, given in hypnosis, remedies this trick of the subconscious self. Children suffering with night-terrors are promptly relieved by a few hypnotic suggestions that they shall no longer talk or cry out in their sleep; the subconsciousness accepts these positive statements as facts and at once establishes them as such.

We here arrive at a point wherein it may need to be made more clear how these things are brought about. How is it that a new idea, a new way of doing things, can be received when older ways, even if not desirable, have been so long established? Why, for instance, can a child be made to accept the idea that it be truthful, or affectionate, or to no longer run away from school, when it cannot be reasoned or coerced out of doing these things? Why can we correct function in such manner as to correct faulty physiological processes, in cases where medicine is of no avail, or even in lieu of medicine?

The solution will lie in the fact that although the human consciousness is a structure of great complexity, and still imperfectly understood, we have learned that its underlying stratum, the subconscious-self, is within certain not yet well-understood limits, distinct from the ordinary waking or objective-self, and that the former is the source of the motive power of all of the body's functioning. We have also learned that impressions made upon this underlying consciousness, (or subjective, subconscious, or subliminal self,) will be received, and without consulting the reasoning or objective self, and even at times in direct opposition to the latter, will be carried out to whatever the natural limits of the organism may be. We know that this is the consciousness that is entirely in evidence in the infant, (when the reasoning consciousness has not yet developed,) and is very largely in evidence in the child, diminishing in its accessibility as maturity approaches and the objective consciousness develops. Yet, in maturity, and even into old age, the subjective self may be reached by means of the hypnotic state, and is in all of us continually accessible in the waking state to varying degrees.

Whenever in the waking state our ordinary reasoning consciousness is lulled or absorbed, it is the subjective self that comes more largely into evidence and receives impressions more forcibly. Exactly for the same reason that we can implant any sort of an impression upon the young child's subconscious mind and by repetition cause it to become permanent, so can we in later years, through the same channel, make impressions and cause them to become permanent. The only difference will lie in our method of procedure. The subconscious mind is always ready to do, as we would have it do, consistent with the limits of the rational, if we can but get at it.

But we must bear in mind that the process if suggesting to the subconscious mind is a subtle one; we cannot get at it when the objective consciousness is on its guard; it must be in either a roundabout or indirect manner when the individual is awake and alert, or it must be done in hypnosis when the waking consciousness is still more suspended. The skillful stump-orator or revivalist engages the attention of his hearers in the one direction, and through side entrances thrusts in his suggestions. They are moved to voting for whatever candidate or principle may be suggested, or to feelings of religious emotion or fanatical frenzy, the reasoning consciousness being for the time entirely suspended, literally "spell-bound." The principles of mob-action are of the very same nature, based entirely upon the partial suspension of the reasoning self.

Innumerable physiological phenomena are constantly being produced in all of us through the same channels. The act of yawning at the sight of another's yawn is the most familiar of all examples. Nausea, hunger, thirst, can easily be awakened in any one upon the appropriate suggestion. Certain epidemics, extending from the present time away back into ancient history, have been wholly due to suggestion. Social, religious, ethical and speculative epidemics are abundant in the land today and their etiology is always that of suggestion in the waking state. A prominent professor of chemistry in a New England college has told me recently that he never lectures upon the subject of sugar in the urine, but that he expects to find as many as half a dozen students who come to him with grave anxiety, convinced that they have many of the described symptoms. The only difference between such suggestibility and that of hypnotic suggestion is one of degree and in the method of administration.

Suggestion in the waking state works always indirectly, *i. e.,* it must get in through side entrances upon what is called the marginal consciousness, the focus of attention must be elsewhere directed, whereupon the marginal consciousness will greedily absorb whatever suggestions may be abroad.

Suggestions in hypnosis must always

be given directly, with positiveness and force; it must be hammered into the subconsciousness with great insistence. The reasoning self here is suspended, for the subconscious self cannot reason up to a subject, inductively, it can only reason down from it, deductively, accepting whatever premises are placed before it,—always provided that these statements be consistent with the legitimate and possible. In making such suggestions it is to be understood that we do not say a thing is so because it *is* so at the time, but we say it is so in order that it *may become* so. In treating a patient for a rheumatic or a neuralgic pain, the pain is real enough, at times even to the degree of its objective symptoms as evidenced by inflammation and swelling, but often upon positive statements to the subconsciousness that it is not present, it ceases to be present.

A lady suffering from one of the numerous morbid fears, as instanced in one of my patients, who could under no circumstances go down the street,—who was wholly inhibited from going beyond the dooryard by reason of a nameless conviction that she could not, learned shortly to lose all consciousness of her besetting phobia upon appropriate suggestions. A little boy of eight, so pale and anemic that his ears were translucent; who was wholly spiritless and was passing from five to six times the normal amount of urine per day; and in whom I could awaken no response through the administration of suitable tonics, underwent a complete change for the better when hypnotic suggestions were given. It was suggested that he eat well, have no desire to pass water but a limited number of times per day, feel stronger every day and also that his spirits should rapidly improve. The first treatment was followed by an immediate cessation of the abnormal secretion of urine, and during a period of six weeks, wherein treatments were given, he gained ten pounds in weight and became a child full of springs and bounds and antics when at play upon the street, and a happy, animated boy in the home and at school.

A little girl of six had been steadily losing in weight because of her strong dislike for food and seeming inability to eat, and would respond to neither the coaxing of the mother, nor the various tonics administered. She was at first gradually and then more rapidly brought to taking more and more food, and the restoration of a normal appetite, rosy cheeks and superabundant spirits, upon positive suggestions, repeated over a period of some weeks, to the effect that she could and would eat an abundance of such food as was indicated.

A boy of nine who was backward at school, afraid of and unwilling to play withother children ,given to frequent fits of moroseness and temper, had night-terrors and refused to eat the food placed before him, and who could not be induced to leave his mother's side, became, in the course of a dozen treatments by hypnotic suggestion extending over one month, wholly changed into a sunny, happy child who ate normally, was able to keep up with other children of his age at school, not afraid to recite before his class, and quite willing to absent himself from his mother for days.

Moral perversions in children as well as in adults, are often based upon physiological disturbances of the system, for there is a parallelism between moral and physiological states and the one can influence the other. Existing disturbed physiological conditions often express themselves in perversions of the mental and moral nature as is evidenced in melancholia and the various insanities, the toxic nature of which is at present unanimously agreed upon by alienists; we also know that in crime and immorality the basic physiological structure is of a nature to predispose to such perversions. It does not follow that all perversions toward crime are capable of rectification, but there is a numerous class wherein by means of education and suggestion, a new and corrective impulse can be given to the neural discharges, which will determine brain impulses into more normal channels.

A case in point is that of Mrs. X—, a woman of middle age who had for years been in a state of great mental irascibility and given to violent and uncontrollable fits of anger towards her husband. Her facial expression was one of sullen discontent, and she was in a state of great mental depression. There existed at the same time much muscular weakness, a marked disturbance of the functions of nutrition and elimination, irregularity of other functions and an asthma so aggravated as to give her face a markedly livid hue. Occasional treatments by hypnotic suggestion, given over a period of three months, entirely changed this woman into a wife who had perfect control of her temper and who was always affectionate towards her husband. She felt happy and possessed of kindly feelings toward all people, became able to work, nutritive and other functional irregularities became normal, and the intensely aggravated asthmatic distress was reduced to its organic minimum, with a total disappearance of the cyanosis.

It is not to be supposed that individuals who are suffering from disordered physiological functions, dominated by exaggerated or perverted moral, social or intellectual traits, are devoid of normal impulses as well. These latter may be, and usually are, present but are repressed by the overpowering nature of the dominant wrong ones. It is here that hypnotic suggestion, reinforcing powerfully whatever methods of educational suggestion may be applied, is able to direct the functioning impulse more strongly in the desired direction; by repetition and the resulting prolongation of the desired activity, there ensues a lifting of the inhibition that prevails, enabling the inhibited centres to do more effective work.

No remedial agent can rank for potency in the same category with that of hypnotic suggestion for children, in disorders such as those referred to above, and which are of the nature of mind and body-habits. It is a molding power of unparalleled force since it lays hold upon the subconscious self, so accessible in children, and it is the subconscious self that does things!

Even in sleep it is perfectly feasible to communicate with the subsconious mind of a child. It is but necessary to make the appropriate suggestions in a low tone, with clearness and force. Though the child is not aroused to a consciousness of what is going on, it gradually comes up out of the total oblivion of deep sleep to a sufficient degree to receive and register the impressions that are being made, and when these cease the child sinks back again into the deeper slumber, having no knowledge of what took place; but the subsconcious self has retained the impressions and proceeds to carry them out. The writer has frequently treated children and even adults in this manner with perfect success, particularly in cases where hypnosis could not be readily induced.

We are often desirous of treating children by suggestion who are too young to hypnotize, since to induce hypnosis it is necessary to claim and hold the attention. By reason of the great accessibility of the subconscious self during sleep, there lies open a broad highway whereon the physician, and even more the parent, can approach the plastic subconsciousness of the child and engraft upon it whatever modifications are needed. Whether such suggestions be for the correction of faults, the molding of character, or the correction of abnormal functioning of the body, they are all equally feasible and of the utmost potency. The several instances cited above as amenable to hypnotic suggestion are merely isolated cases, taken almost at random out of a constantly growing material from the writer's experience, which could be multiplied many thousands of times from that of observers in every part of the world.

The infant is born with merely an instinctive or subconscious mind, which is its first and life-long inheritance, and which, with its suggestibility, is its strongest, dominant force through life. The subconscious self is the primitive self, the functioning self. It is that self which receives and retains all formative impressions of body and mind as well. The subconscious self is always accessible and always open to modification in its manner of doing, in inverse proportion to the age of the individual. The reasoning or conscious self is but a later action engrafted thereon.

All the impressions, all the ways of doing that have been acquired during the lifetime of the individual, are held in custody by the subconsciousness; they are all impressed to varying degrees, dependent upon their intensity and frequency. It is the reasoning, the objective self only that holds so many of these impressions in leash. The latter would do many strange things were not the former in evidence, and that it does do strange things is shown by our dreams, and in conditions of disease where the governing self is suspended.

We can not shape a poet, a philosopher, an artist or a financier out of any given mental equipment, any more than that we can go beyond a maximum physiological limit with which an individual may be endowed, but we can recognize the tendencies of a child, and bearing in mind the wonderful susceptibility towards modification with which it is endowed, the great law of variation, and the equally great law of suggestion, we may intelligently co-operate with these and thereby enter into a future for the parent, the teacher and the physician, whose limits of usefulness will far transcend anything that has hitherto been reached.—Jour. of Med. and Sci.

Skin Manifestations in General Diseases.

By Geo. G. Melvin, M. D., Treas. N. B.

I have been led to select this title in consequence of the excellent and interesting paper presented to the Society last spring by Dr. G. R. J. Crawford upon "Eye Complications in General Diseases." Although, of course, I cannot hope to rival the inimitable manner in which that learned gentleman placed his observations before you, yet in a modest way, and following "afar off," I beg to direct your attention to some of the more notable manifestations of skin irritation met with in the course of which, from a dermatological standpoint, we call "general" diseases.

To one approaching this subject, the very first obstacle he encounters is the question, what are "general," as distinguished from dermatological diseases? Indeed, this is a somewhat difficult problem to determine, when viewed from any "special" standpoint. St. Paul's remark, that "we are all members one of another," and that "when one member suffereth, all members suffer with it," although not made with respect to the human body, in fact, being only a figure of speech indicating the various individuals comprising the early Christian Church, is yet strictly true in a medical sense. There is, after all, no such thing as a "local" disease. A flea-bite will cause inflammation in the affected part, and more or less poisoning of the whole body. But while this is true, we cannot forever be so dogmatically scientific. Convenience, as opposed to literal truth and mathematical exactness, is continually crying for consideration and will not be comforted. Therefore we do speak of local diseases; of diseases of the eye, the ear, the lungs, the stomach, and finally of the skin. Certainly, if one cares to take the trouble, he may readily determine the extent of the empire of dermatology, by going through the contents of any standard work upon the subject. Yet, even then, he would meet with difficulty. Shoemaker classes measles, scarlet fever and rotheln, as diseases demanding his attention, while Crocker, as good an authority, wholly omits reference to them. Personally, I have half a suspicion that those diseases, in this city at least, are not considered by the profession as belonging to the domain of the specialist. Still, they are so near the border-line, that, in common with roseola, I shall omit them. Of course regarding smallpox and syphilis there is no question. These are pure and simple dermatological, and are so regarded the world over.

With this rough and incomplete outline of the area of our subject settled, it is proper to say that I do not intend going in anything like an exhaustive manner into the discussion. Only a few of the more commonly met with diseases will be touched upon; just enough to awaken thought upon the matter, and to elicit that discussion, which is always much the more valuable part of our exercises, especially when the present humble writer comes before you. Neither shall I attempt to make any classification. The nature of the subject scarcely admits of it; and the diseases having skin-symptoms will be mentioned just as they happen to present themselves to the writer's mind, due regard being paid to their frequency and importance.

In any consideration of this subject, perhaps the first disease occurring to the majority of us, would be typhoid fever. The "rose colored" spots have, for ages, been a classical symptom of this disease.

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*Read at meeting of the St. John Medical, Society, ct 4th 1901.

They were among the first points mentioned as diagnostic signs, in nearly every text-book upon the practice of medicine. Their mention is so universal, that it at once becomes to the young practitioner the first disillusioning fact which tends to shake his faith in the infallibility of his teachers and his library. This is because, although religiously looking for these objective signs, he rarely finds. them. Typhoid is one of the most insidious of all diseases in its approach, stealing upon the patient like a "thief in the night," occasionally totally intermitting for twenty-four hours, and at times assuming other guises, in a way "to deceive, if it were possible, even the very elect." This is the interval when the budding Janeway looks for and fails to find the "rose-colored spots" and moralizes upon the vanity of looks and diagnostic signs. So far as I know, no statement has been tabulated as to the frequency of their appearance, but it is certain that their appearance at any time during the course of the disease is far from constant. The following facts will, perhaps, exhibit about all that is known concerning them as a sign of typhoid. (1) They appear about the seventh day of taking to bed; the latter itself being a very uncertain date. (2) The abdomen, rather than the chest, is their favorite primary location. From there they spread to the chest, sometimes the thighs, and more rarely to the back. (3) They are more common in adults than in children. (4) They are more common in town than in country—a very curious fact, and one admitting of all sorts of speculation. (5) They number from half a dozen to two dozen; exceptionally, many more. (6) They are "rose" colored only in the sense of the color of the centre of a white rose. (7) They are not spots—that is, macular, at all, but papules, slightly raised in the centre, and so, palpable to the light touch. (8) Once out, they presist during the whole course of the disease. This applies, however, only to the papules as a whole, and not to the individual lesions. These latter may disappear after a few days' life, being succeeded by a new crop, springing up not as a crop but one by one. (9) Their number, or time of appearance, bears no relation to the character of the disease as regards severity and so forth. It is next to useless to speculate upon their cause, the singular uncertainty of their appearance, or the remarkable prediliction they show for city patients. This latter peculiarity is too occult for the present writer, but it has occurred to him that their appearance after a week in bed may be due to the long continued constant temperature obtained by reason of this position. If a reason might be hazarded for their. favoritism for city patients, the fact of the more constant sponging and bathing of the latter might possibly be etiological. The above facts being borne in mind it will be seen that their value as a diagnostic sign is but small. Certainly when they do appear, it is a valuable and oftentimes comforting corroborative evidence, as it is pretty generally admitted that no other disease with which we are acquainted exhibits an eruption at all comparable to this.* Another point of great value is, that as they are as likely to appear upon very mild as upon very severe cases; their advent upon the former often relieves the physician of a delicate and embarrassing position.

It is a short, and, to every general practitioner, a very familiar step from inflammation of Peyer's patches to in flammation of the parenchyma of the principal organs of respiration, known as pneumonia, or more properly, as Flint pointed out, pneumonitis. Here again

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[*Note. I desire to modify above statement to the extent that, occasionally, a haemorrhage into the cerebellum may produce an eruption liable to be confounded with it.]

the skin comes into play, and this time with a very valuable diagnostic sign. It differs radically in almost every point from the corresponding symptom of typhoid. In pneumonia there is no lesion, in typhoid there is. The skin serves but as a glass through which we see, not "darkly," but very clearly indeed, the nature of the trouble underlying it. Again, in pneumonia the skin-sign appears early, often indeed with the very first of the subjective symptoms. Also, in the respiratory disease it is always in evidence; we do not have to uncover the patient; it is in his face. Again, while it cannot be said to be so certain a sign, being simulated by opium poisoning or hæmorrhage into the base of the brain, yet it is sufficiently so, in connection with other manifestations almost always present, to be extremely valuable. Unlike the papules of typhoid, also, there is nothing mysterious in its causation. It is what we would naturally expect, knowing as we do the exact pathological history of pneumonitis. Again, unlike the sign of typhoid, it does bear a relation to the gravity of the disorder. In only one particular does it correspond with the typhoid symptom; it is not always present. But its absence is a congratulatory condition, as it shows a moderate onset of the disease. I need scarcely say that I refer to the pneumonic "blush"; really not a blush at all, but the characteristic dark, almost blue-red area that appears on the cheek of the victim of pneumonia. Every one knows it is due to the non or insufficient aeration of the blood, consequent upon the non-activity of one or more of the pneumonic lobes. Little more need be said about it. It is, perhaps, more pronounced upon those with transparent complexions than upon those with features affected by exposure to the weather. But this is not alwoys so, as I have repeatedly observed it upon almost physically perfect leborers, as lumbermen, tanned by a whole winters' exposure to the snow-reflected sun, and by the wind and smoke of a typical woodman's shanty. Just why it should not always remain during the course of the full force of the disease is not readily apparent, but the fact is that it often does not. Frequently, as the disease progresses, going on to involve lobe after lobe the blush disappears. It is to be presumed, owing to the well observed law of "accommodation." The system here as elsewhere accustoms itself to new and untoward conditions; and the whole surface, perhaps, takes on a somewhat dusky hue, so rendering less apparent the primarily affected area.

Which of us, in thinking upon this subject, would fail to remember the skin changes consequent upon child-birth and pregnancy? Here is a fertile and most interesting field for medical philosophy and speculation. The striæ upon the abdomen, following child-bearing, are among the most constant and valuable in the whole range of dermatological signs, yet while comparatively constant, they are not incurable. Women have bourne children and have been left with virgin-like abdomens. The cause is thought to be two-fold; it is either in the small size of the child, or in the exceptional pelvic capacity of the mother, or in both combined. It is generally taken that no question attaches as to the cause of striæ, but with all due deference to authority, there has always remained a suspicion with myself that stretching or over-stretching has been too readily assigned as the universal factor. Scores of times have I observed a like, in fact, an identical series of striæ upon the upper and interior aspects of the thighs. This is a site of course altogether beyond the direct mechanical influence of the fœtus, and hardly ever affected with anasarca. The feet, the ankles and the lower legs are repeatedly swollen and distended—

nothing is more common—but it is rare, indeed, to see the thighs, near the body, enlarged to any extent. I have satisfied myself, in the course of repeated deliveries, dating from the first one, that such striæ do occur without the slightest intervention of stretching of the part. Pathologically, I admit, they may not be the same, as I have never made a section from any of them for the microscope, but clinically they appear identical, and I am certainly inclined to regard them so. I have no theory to offer to account for it, but would be glad indeed to hear it explained by any of the members present. The darkening and widening of the areola about the nipples, the formation of papules in the same region, and the increased size and erectility of the nipples themselves, are, all of them, suggestive and all pretty constant, and all undoubtedly due to the normal increased activity of these organs, so essential to child-rearing, or rather which nature intended to be so essential—the breasts. None of these changes, are, of themselves, radical. These conditions, the areola, the papules, and the erectile tissue, all existed prior to feçundation, the latter accident but endowing them with new life and vigor. Vastly different is it with yet another skin manifestation in the pregnant woman. I refer to the darkened and pigmented maculæ and plaques so often observed upon the face. Here, unlike the sign in pneumonitis, a real tissue change takes place. A real lesion is formed by the deposit of pigment in the Malpighian layer of the skin. A multitude of interesting and obscure questions springs up about this fact. Why is the pigment deposited? Of what does it consist? Where does it come from? What are the organs concerned in its manufacture and deposit? Why should the face be selected as the favorite site of the deposition? These are a few, a very few, of the questions suggested by this strange metamorphosis, questions that, so far as I am aware, have never been satisfactorily answered. We are in a measure, reasonably familiar with the deposit of pigment. But, apart from its deposit in fœtal life in the colored race its causation by the exhibition of drugs, it is almost in every instance a pathological process. Yet, pregnancy is not, or should not be, pathological. All evidence goes to show that in a normal case, pregnancy is for the well-being of the mother. What then is the cause of the pigmentation? If an answer might be hazarded, it results from the necessary excess of blood in the mother consequent upon the needs for nutrition and growth of the fœtus, and the lack in the latter, to a proportionate amount of the coloring matter of the blood. The excess, therefore, of this coloring matter is deposited in the maternal tissues. But why those tissues should be the conspicuous ones of the face is too occult for the present writer's speculation.

Addison's disease furnishes a fertile field for the discussion of skin complications, but as this article is directed to those diseases in which the skin plays but a subordinate part, I have thought well to omit it.

Tuberculosis in the lower and human families is at present a subject of wide spread interest. It has received an astonishing fillip in consequence of Koch's declaration of the fundamental difference of habitat between the human and bovine species of bacillus. Therefore anything in this direction is of surpassing interest. Tuberculosis may be said to attack man under three guises. (1) As phthisis pulmonalis; (2) as lupus vulgaris; and (3) as struma or scrofula. The other sites and pathologic methods of the bacillus are minor and generally secondary to some one of the thre foregoing—nearly always to the first.

Beyond mere blanching of the dermal

covering, phthisis pulmonalis has no marked or notable effect upon the skin differing from that upon other organs not locally assailed. This blanching is so open and apparent an effect of anæmia —a result of the destruction of the red blood corpuscles, that it is scarcely worth referring to. Lupus vulgaris is so essentially a disease of the skin itself, that it is, at once, out of court in this paper. It is in the third method of tubercular attack that we find an interesting phase of skin lesion—a lesion playing an important and yet subordinate part. Struma, or scrofula—for I see no reason for abandoning the older term—is essentially a disease of the glands, not of the skin. It is, indeed, very questionable if the skin is ever primarily attacked. Here is one of the profound mysteries of pathology. We may rest assured that we are yet very ignorant of the life history and methods of the bacillus tuberculosis or else that a huge mistake has been made in connection with this parasite, as regards its work in the glands, or in the skin, or in both. The pathology of lupus vulgaris has shown us that the bacillus has an express prediliction for the skin, perhaps making little or no distinction between the cutis vera and the lower Malpighian layers. We also know, or think we know, that the same micro-organism has a similar taste for glandular tissue, and that it affords a peculiarly comfortable and appropriate nidus for the bacillus. Yet, when seated in one tissue, it hardly ever attacks the other. In other words, lupus is rarely seen in connection with scrofula, and scrofula almost never leads to lupus. Neither, and this is equally wonderful, do either of these diseases predispose to tuberculosis of the lungs. I am aware that the latter statement is weaker than the former. Scrofula and pulmonary consumption either in the same individual or in the same family is not an extremely infrequent event. But what shall we say some one of the three foregoing—nearly effected one, as that of the skin covering a scrofulous gland? Even when the process of inflammation and suppuration has succeeded in making a lesion in the dermal envelope of the gland, that lesion is almost never lupoid in character. I am not prepared to say that it is never so, absolutely, but I have never met with a case, or, indeed, read of one. The skin lesion possesses no interest other than that attaching to any ordinary suppurating process. Though the solution of continuity of tissue in these cases is essentially chronic, it heals at once, when the source of the suppurating and irritating products is eliminated. The same strange of a tissue so closely connected with an independence is seen between lupus vulgaris and pulmonary consumption. Repeatedly have I seen extensive lupus infiltration and ulceration at the outlet of the anterior nares; at the very gate of the respiratory tract; at a place where never a breath can be drawn without it gliding directly over the parasite-haunted region. Yet the lungs almost invariably remain free from the effect of the bacillus. At the same time we go into hysterics if an unfortunate victim of consumption happens to spit upon the floor of a car, in a cab, or even upon the same street with us! These are, to the humble mind of the writer, mysteries. Certainly it is very easy to talk of immunity to tubercular action when once the tubercular lesion is seated anywhere within the system, but this immunity does not prevent tuberculosis of the intestines following as a very frequent result of the pulmonary lesion. But I am wandering from my text. Little indeed, remains to be said regarding the skin lesions of scrofula. Perhaps, if any generally constant effect is obtained other than the breaking down of the dermal tissue, a direct result of suppuration, it is the general thinning of such tissue over the whole of the affected gland. This I have repeatedly noticed, and ascribe it entirely to the stretching of the skin covering, consequent upon the enlargement of the gland. Another pretty constant feature is the presence of varicose veins through such skin-envelope, resulting, sometimes, when the abscess is opened, in protracted, though not often alarming hæmorrhage.

I find, as I proceed, that this subject promises to be almost an endless one. I have but mentioned three diseases, and already have written more than is fair to impose upon the society. The subject merits more and better discussion that I think it has ever received. Almost unconsciously, it may be, yet to most of us, the skin offers the most ready, safest and most frequently referred to avenue of diagnosis and prognosis at our disposal. Our first introduction to the patient is invariably followed by a close and rapid scanning of his countenance, and what is the countenance but the skin of the face? True the muscular and bony systems lie beneath it, the former especially being subject to the influence of disease, but only when such disease is of some continuance.

It would be easy to grow eloquent over the close relationship of a healthy body and a sound skin. No better thought could be selected to form the peroration of a medical address or a medical paper. But the modest writer never attempts peroration, and is satisfied to conclude, if he thinks he has uttered one original thought, or said that which will give rise to one in the minds of his hearers.—Maritime Med. News.

Medical Miscellany.

COATING PILLS WITH SALOL TO INSURE ACTION IN THE INTESTINES ONLY. To coat pills with salol so that they may not be acted on until they reach the intestines, a solution of the salol in ether has been employed. This method of application, it is said, however, has not proved wholly satisfactory. The pills look "dusty" and the coating rubs off. It has been found that by melting the salol and rolling the pills in it while liquefied, a satisfactory result can be obtained. Sonnenberg in an article in this journal has given details of the method as follows:

Into an enameled tin pan, such as is used by photographers, pour a small quantity of salol. Any other vessel of non-attackable substance may be used, taking good care that the sides are not too thick so that they cool made with some fatty excipient and contain no appreciable moisture; they should be first covered with a coating of cacao-butter; and after the coating has become firm, rolled in the keratin solution, and dried on parchment paper to which they will not adhere. The process must be repeated three or four times to secure a sufficiently thick coating.—Druggists' Circular.

A NEW LOCAL ANÆSTHETIC. A new local anæsthetic, obtained from an Indian plant, gasu-basu, has recently been submitted to careful examination. The anæsthetic action of this substance was discovered a year ago by a dentist in Fiume. He separated an alkaloid, and in his experiments used the salt obtained by treating the alkaloid with hydrochloric acid. This salt has been named nervocidine. Two drops of a 1-20 per cent solution applied to the human conjunctiva produced a burning sensation, accompanied by lacrymation, and followed, after twenty minutes, by anæsthesia of the cornea, lasting five hours. After seven hours the cornea regained its normal condition. A 1-10 per cent solution of nervocidine brushed over the mucous membrane of the cheek caused local anæsthesia of the brushed surface and of the tongue, accompanied by loss of the sensation of taste and the perception of touch, but without loss of the perception of heat and cold. The general action of nervocidine on the system was that of a poison producing death by paralysis of the motor centers and of the peripheral nerves. All experiments proved that nervocidine was a powerful local anæsthetic, for the effect of a ½ or 1-5 per cent. solution might last two or three days. It is, however, not without its drawbacks, producing local irritation, slow anæsthesia, and a liability to nausea, vomiting, salivation, and other symptoms of general poisoning.—Philadelphia Medical Journal.

SURGICAL TREATMENT OF BRIGHT'S DISEASE. Last year Pousson, in the Gazette Hebdomadaire de Médicine et de Chirurgie, stated that he had operated in four cases of acute nephritis, to which he added eleven others collected from literature—a total of fifteen cases with four deaths, a mortality of 26.66 per cent. He had operated in three cases of chronic nephritis, in one of which he was completely successful; in the other two the symptoms of intoxication were only temporarily suspended. From these facts he was led to conclude that in certain affections of the kidney the insufficiency of this organ to properly clarify the blood becomes a formal indication for nephrotomy or nephrectomy, the former being the operation of preference.

These results, encouraging as they

seem, are now thrown into the shade by the brilliant work of Dr. George M. Edebohls (Med. Record), which seems to have opened a new field to surgery. He reports a series of eighteen cases operated upon by him, in which the patients suffered from chronic Bright's disease. The first of these operations was undertaken for the cure of movable kidney in which there was coëxistent nephritis. Nephropexy was performed. The improvement was so marked that Dr. Edebohls was led to attempt the cure of patients suffering from Bright's disease alone by surgical operation. Of these eighteen cases the first was operated on in 1892. All degrees of severity were present, case seventeen being apparently in extremis when she came to operation —yet she made a recovery. All but two of these patients are alive today; one died after hysterectomy, eight years after kidney operation; another died after an operation for ruptured tubal pregnancy. Two cases have been lost sight of. Not all of the balance are cured, but all show remarkable improvement and some apparently actual cure persisting for several years. The operation as now performed consists in removal of the fibrous capsule of the kidney. The kidney is then slipped back into its fatty capsule, which is rich in blood-vessels. The result is the formation of a new and rich arterial blood supply in the connective tissue adhesions which form. The increased supply of blood leads, most probably, to gradual absorption of the interstitial or intertubular inflammatory products and exudates, thus freeing the tubules and glomeruli from external compression, constriction and distortion, and permitting the re-establishment in them of a normal circulation. The result of this improved circulation in and between the tubules and glomeruli is the regenerative production of new epithelium capable of carrying on the secretory function.

Further experience is needed to determine whether the newly formed connective tissue may not ultimately undergo cicatricial contraction, and thus the local circulation again become obstructed.—Med. Times.

HEREDITY AND TUBERCULOSIS.

Both the medical profession and the laity have so long believed that heredity plays a prominent part in the development of tuberculosis, that there is very little disposition to look upon it in any other light. However, just as our ideas concerning the curability of the disease have been almost completely revolutionized during recent years, so possibly they may become radically changed in regard to the influence of tuberculosis parentage.

A most interesting study is that of Dr. King concerning "Heredity in its Relation to Immunity and Selective Activity in Tuberculosis." (Medical Record, 1901, L X, 565). He gives the results of carefully recorded observation in 242 cases in his own practice where the opportunity for accurate family histories and other data was exceptional. He attempts to prove that instead of a predisposition the child of tuberculous parents inherits a relative immunity. In 103 fatal cases of the 242 studied, seventy-six occurred among persons of non-tuberculous parentage. From the earliest manifestation of the disease until death, the average time was 2.93 years. The remaining twenty-seven cases were children of tuberculous parents. The average duration of these was 4.01 years.

These figures are very suggestive. It is well known too, in sanitarium treatment that patients of phthisical build and tuberculous history have equal chance of recovery with those in whom there is no such history, and the rapidity with which the robust and vigorous individual, in apparent perfect health and with no tuberculous history, frequently succumbs should convince us that the physique and history are of less importance than we have been accustomed to suppose.

Statistics based on the history of several thousand families show that only about one-third of all cases of tuberculosis have tuberculous parentage and that only ten per cent. more of children of tuberculous parents have the disease than of other children and this may easily be explained by the greater liability of the latter to infection because of intimate family association. Too much reliance should not be placed in the figures of statistics but at present the evidence is greatly in favor of the belief that actual inheritance of the disease is of the rarest occurrence and that the so-called inherited predisposition is of comparatively minor importance.—Providence Med. Journal.

CHEMISTRY OF THE STOMACH IN CHILDREN. Dr. Louis Fischer read a paper on the subject before the New York Academy of Medicine.

Some of the examinations were made upon the gastric contents, obtained by siphonage with a No. 6 to 10 Nelaton catheter two or three hours after feeding, while other examinations were made upon the vomited matter. The chemical examination consisted in testing the filtered chyle for hydrochloric acid, lactic acid, propeptone and rennet. A series of ten breast-fed infants constituted one series. In five of these children the coagulum of milk was very fine, but in the other five, who were children suffering from rachitis, syphilis and like disorders, the coagulum was coarse. Hydrochloric acid was present in all but two of these. Five bottle-fed children were also made the subject of examination. In them the vomited matter ejected two or three hours after feeding was usually thick, lumpy and acid. Hydrochloric acid was absent. The acidity was usually due to lactic acid, but occasionally to acetic or butyric acid. There was also very little propeptone and peptone.

Dr. Einhorn said that he too had examined a series of normal children, both breast-fed and hand-fed, but in only two had found free hydrochloric acid present. These children had varied in age from three to eighteen months. Dr. Fischer's examinations had been made under difficulties, for he had used milk as the food instead of a test-meal. As milk contains a large proportion of albuminates, which unite with the hydrochloric acid, it followed that small quantities of free hydrochloric acid would be masked by the ingestion of milk. It was because of this that the test-meal of roll and tea—substances containing little albuminate—had been employed by most observers. While it was a general rule that hydrochloric acid was absent during febrile affections, this was not invariably the case. He had noted the presence of hydrochloric acid in some adults having typhoid with marked pyrexia.

Dr. M. I. Knapp said that he had been studying the tests for acetic, butyric, citric, lactic, oxalic, and a number of other acids, and had noted that all of them reacted to a greater or less degree to Congo paper. Gunsberg's reagent he had found very useful, but a still more delicate reaction was obtained with ammonio-citrate of iron and potassium ferrocyanide, which form a blue color only in the presence of an inorganic acid.—Pediatrics.

MEDICAL DIAL

A Monthly Record of Medicine and Surgery

Published by MEDICAL DIAL COMPANY

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SUBSCRIPTION PRICE

United States, Canada and Mexico, per annum, in advance,	$1.00
Foreign Countries in the Postal Union, per annum, in advance,	1.50

N. B. Matter for the reading pages should reach office of publication on the 20th of the preceding month and display advertising on the 25th, to insure attention.

Vol. IV MINNEAPOLIS, MINN., JULY, 1902 No. 7

ASCITES IN SOLID ABDOMINAL TUMORS. In the Philadelphia Medical Journal for May 2nd, last, Dr. Wm. Osler, of the Johns Hopkins University, calls attention in a brief paper to the lecture of Dr. Eden in the Lancet of February 8th, concerning two cases of solid abdominal tumors with ascites, and thinks these causes have not been sufficiently recognized in abdominal dropsy. Dr. Eden believes ascites is the rule with solid tumors of the ovary, and so rare with fibroids of the uterus that its presence almost serves to exclude them in the diagnosis. Dr. Osler mentions a case he saw in consultation with Dr. Walker, of Dundas, Ontario, in 1885; the woman had recurring ascites, of doubtful origin, for which she had been tapped many times. The examination being made soon after the removal of the fluid, the tumor was diagnosed in the lower part of the abdomen, and a week later, Dr. Thomas, of New York, removed a solid ovarian growth, since.
and the patient has been well ever

Dr. Osler says, "His interest in the subject has been recently renewed by a very remarkable case referred to him by Drs. Kochel and Fackler, of a woman, aged 53, who had at intervals for three years attacks of ascites, and within the past four months had been tapped four times." Ten years before a solid tumor was diagnosed in the abdomen, and the nature of the case had been much discussed. The case was referred to Dr. Osler as to the advisability of an operation. There was a solid tumor in the lower abdomen, that could be moved from side to side. The doctor suggested the possibility of dropsy dependent upon a solid ovarian tumor, and his colleague, Dr. Kelly, operated, "and found a large fibroma of the right ovary with twisted pedacle and adherent to the omentum. The tumor was removed, and the patient recovered."

Dr. Hunner, Prof. Kelly's first assistant in the Johns Hopkins Hospital, collected the cases bearing upon this point from the gynecological clinic of the hospital, and among 9400 cases ten patients were found with solid ovarian tumors, the ages being from thirty-two to sixty-three, and in six of these cases ascites was present. Three of the patients had required repeated tapping, and all recovered after operation.

In the first edition of Dr. Osler's text-book (1892) there is a reference to solid tumors as a cause of recurring ascites; but it has not attracted the attention of surgeons particularly. The subject will now be widely noted as the well recognized reputation of the Doctor as a careful and accurate diagnostian of disease commands the confidence of the profession. He considers the question of operation a very important one, as the solid tumor is usually benign, and the cases mentioned in Dr. Kelly's clinic have uniformly recovered. Just how solid tumors of the non-malignant variety should cause dropsy, and that of a recurrent form, is now a mystery. The causes usually assigned have been from pressure upon the circulation, valvular disease of the heart, or some morbid condition of the blood; but the recoveries noted after operation seem to point to the tumors as the real cause of the disease, especially in the form of recurrent ascites.

HEMORRHAGE OF THE HAIR.

The following conversation with an employe in a leading Minneapolis barber shop makes one wonder how great a knowledge of physiology is required by the state board of examiners of barbers.

The astounding statements of the tonsorial craftsman are quoted from memory and may not be given adliteratum, but they are exact in substance.

The operation of capillarectomy was drawing to a close when the operator said to the patient:

"Your hair comes out sir, doesn't it?"

"Yes," I replied, "it has been coming out a long time."

"You ought to have it singed," insinuated the young man.

"How does singeing act on the hair?" I inquired.

"It keeps it from coming out."

"Yes, I know; but how. How does scorching the ends have that effect?" I was not only in search of information; I was enjoying a delicious revenge for the many many times when I had been the questioned instead of the questioner.

"How does it act?" said the barber. "Why, it keeps the hair from bleeding and losing strength."

"But the hair doesn't bleed," I said. "It contains no blood vessels."

"Oh, yes, it does," replied the barber earnestly, "you ask any doctor. It bleeds when it's cut, and gets weak and falls out. Why, the hairs are hollow, you know; regular little tubes. I know what I'm talking about."

I cannot quite decide whether I was the intended victim of a "trick of the trade," or not. The explanation was plausible enough to convince a credulous layman, and may have been an invention. But, if so, the young man was an actor, for tone and expression were those of a man bestowing on an ignorant brother, an interesting scientific fact from his vast fund of such information.

—CARYL B. STORRS, M. D.

HAMLINE GRADUATES.

There were 27 graduates of the Department of Medicine, Hamline University, this year, who gathered at the Hennepin avenue Methodist church, Minneapolis, Wednesday evening, June 4, where an able and eloquent address was delivered by Rev. W. B. Riley, pastor of the First Baptist church. Musical features were a part of the programme, and the medical faculty occupied the platform. The class received their diplomas at the commencement exercises at Hamline the following day, and the same evening a banquet was held at the Nicollet house. The following is the list of graduates:

H. A. Larson, A. S. Thompson, T. N. Havorka, O. F. Johnson, A. O. Brustad, Th. Thorkelson, A. Kahala, H. H. Helk, O. C. Quitmeyer, E. W. Humphrey, A. C. Tingdale, M. S. Hirshfield, M. M. Harshbarger, D. W. S. McDougald, G. E. McCann, A. F. Tanner, Adelaide Woodard, T. Holen, J. A. Monahan, J. J. Deetz, E. G. Nicholson, E. D. Strech, L. D. Peck, Miss E. Moulton, Margaret Ryan, F. W. Powers, N. M. King.

MINNESOTA STATE MEDICAL SOCIETY. The sessions of this body were held in Minneapolis on the 18th, 19th and 20th of June. The attendance was not as large as on some former occasions, but there were a good number of practical papers read and submitted by the members of the society in the different sections to which the association divides itself for work. The only paper by an outsider was by Dr. Geo. W. Crile, of Cleveland, Ohio; the subject, "Some Clinical and Experimental Observations on the Surgery of the Neck." Although yet a young man the Dr. has achieved a national reputation as a surgeon, and his paper was received with marked and merited attention.

In his address to the society, the president, Dr. W. A. Hall, dealt mainly with the benefits that the society might derive from a less commercial policy among its members, and recommended that a thorough groundwork of professional knowledge be obtained by practitioners before confining their whole attention to a specialty. He would not countenance the physician who immediately after graduation announced himself as a doctor especially competent to deal with the diseases of the eye and ear, or other orgais of the body.

Officers were elected as follows: President, J. W. Andrews, Mankato; first vice-president, Dr. Whittemore, Elk River; second vice-president, Mary Whetstone, Minneapolis; third vice-president, Florence Baier, Minneapolis; secretary, Thomas McDavitt, St. Paul; treasurer, R. J. Hill, Minneapolis; board of censors, W. A. Hall, Minneapolis; William Davis, St. Paul; members of house of delegates of the American Medical association, A. W. Abbott of Minneapolis, one year; William Davis of St. Paul, two years.

Section chairmen appointed for next year's program are: Medicine, Charles L. Greene, St. Paul; surgery, H. B. Sweetzer, Minneapolis; hygiene, medical education and public medicine, A. C. Rogers, Faribault.

The members for election next year were proposed as follows: W. A. Cook, J. J. Langford of Green Isle, S. J. Wooster of Annandale, D. F. Wood of Hanska, G. A. Stevenson of Albert Lea.

To make affiliation closer with the American association is was made a rule that every member of the state society must be a member of a county society. This makes him a member of the state society, which in turn enrolls him in the American association.

Uterine Drainage.*

By S. A. Brown, M. D., Sioux Falls, S. D.

Every physician who has any considerable experience with the diseases peculiar to women has been confronted with this problem, and doubtless has endeavored to solve it.

The puerperal woman may do perfectly well for several days, no sign of trouble appearing, then suddenly without apparent cause or any kind of warning the lochia will dry up and the temperature will rise. One's first effort must be towards re-establishment of the drainage. This will often be accomplished by simply passing the uterine sound and perhaps pulling it against the anterior wall of the cervix. The lochia reappears and the temperature drops to normal.

There is a case where the cervix has been dilated and the uterus perhaps curetted. Pain in the loins comes on some time from the third to the fifth day. The vagina is dry, the cervical canal is distorted in some way so that fluids do not escape. The drainage is established in the same way.

In some instances the uterus has been imperfectly developed so that the cervix is folded together and the cervical canal is viciously distorted and the fluids fail to find exit by the usual route. The retained fluids become irritating and the organ is thrown into violent pain and contractions so that, while mostly the fluids are forced out through the cervical canal, sometimes they appear to be forced into the fallopian tubes and set up violent inflammation in those sensitive structures. There are cases where lacerations from time to time in the child-bearing woman have rent the cervix so that granulations and much scar tissue have developed. The cervical canal has been impeded by impingement of the cicatrices. Pass a sound into the uterine cavity and withdraw it. A little gush of imprisoned fluid flows out after the sound. Uterine drainage is lost. It must be re-established. The cavity of the uterus is different from all the other cavities of the body in that it will endure lack of drainage for a long time without causing great distress. Nature does not cry out so loud against this as when the urethra, Eustachian tube or lachrymal duct is occluded. She grieves quietly in a meek, resigned sort of way, the fluids are tardily reabsorbed, a thousand little neuroses set to work to create an invalid, as the myriad coral insects proceed to build an island in the sea. Health and uterine drainage go hand in hand. They cannot be separated. As in certain regions in the east and south one must begin the treatment of every case of sickness by saturating the patient with quinine for the elimination of the malarial poison, so in gynaecology the first essential of treatment is to establish uterine drainage.

This paper is not intended to go into the bibliography or history of this subject. I will content myself with saying that Dr. Marion Sims had two students who became eminent—Gil Wylie, of New York, who devised a modification of Sims's stem pessary, calling it a plug, which answers in many cases, and Dr. Palmer, of Cincinnati, who established the fact that a single thread if maintained in position lying through the os internum will maintain drainage. Dr. Outerbridge has devised a wire loop of peculiar shape, well known to you all, which is theoretically admirable, but practically, in my hands, is very disappointing. The loop is held in place by a spring action, but that action pressing the wire continually against the soft tissues causes it to sink into the structures and become buried, leaving the drainage obstructed as before.

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*Read before the South Dakota Medical Association.

Glasgow, of St. Louis, has devised a spiral drain of silver suture wire No. 24—26 which meets the requirements of one class of cases to a marvel. I have found it especially useful after curettement and in those cicatrical cases where the cervical opening is surrounded by stiff, hard, unyielding tissue.

But the means of drainage which I have found to be effective, clinically, in the largest number of individuals, is a simple loop of suture wire, twisted a little to give strength and then passed gently into the uterine canal; long enough to reach well beyond the internal os and too short to be forced by any means against the fundus. Dr. Glasgow says that his spiral will cause nausea if it reach the fundus. The free ends of the wire loop are half an inch to an inch long, and are turned back over the vaginal cervix in such a manner as to prevent the loop from passing too far into the uterus.

This simple device has been of immense service to me in the treatment of uterine troubles of many kinds. Sometimes it will remain in place indefinitely, sometimes it will come out in two or three days. It may be retained in place by passing the free ends of the wire out from the cervical canal through the lips of the os. By the use of this loop I have been able to establish free drainage in a painless manner when all other forms have failed. There is only one needed caution. The very smallest wire that can be introduced is just as efficacious as a large one and being possessed of the least resistance is the one to be chosen. As drainage is so often the most important factor in the treatment of uterine diseases I feel justified in calling your attention to this contrivance, hoping that it may be as successful in your hands as it has been in mine.

Read before the S. D. Medical Association.

Cerebral Cysts, With Presentation of a Case.*

By J. W. McDonald, M. D., F. R., C. S. E., Minneapolis.

As far back as 1864, long before the question of cerebral localization had received much light, Dr. Hughlings Jackson described a class of epileptics in whom the convulsions begin with a conscious sensation in some definite part of the body, such as one half of the face, or one of the extremities.

Following the sensations or aura, convulsive movements of the muscles of the part quickly appear; the patient, as a rule, retains consciousness throughout except when the convulsions become general.

It speaks volumes for the accuracy of Dr. Jackson's observations that he was at that early date able to positively affirm that the parts of the brain involved in epilepsy of this type were the convolutions on either side of the fissure of Rolando.

The experiments of Broca, Fritsch, Goltz, Hitzig, Ferrier and Horsley have abundantly proved the correctness of his views.

The convulsions in Jacksonian epilepsy begin in four different ways:

(a) The "motor form," begins with disturbance in the motor area, and the aura is felt in the face, the arm, the leg, etc.

(b) The "sensory form." In this variety one of the special senses is the seat of the aura. If a warning of an impending convulsion comes to the patient as a "sound," the affected aura is in the temporal region; if as a perversion of taste or smell, the temporo-sphenoidal region; vision, the occipital region is the part affected.

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*Read before the Minnesota State Medical Society.

(c) The "aphasia form." In one class of cases the convulsion begins with spasm in one side of the face, immeditely followed by loss of the power of speech. This may be the one symptom noted in the whole attack. In a right-handed person this would point to a lesion in the third frontal convolusion in the left hemisphere, and in left-handed persons to a lesion in the corresponding area in the right side.

(d) The "psychical form." In this form there is no convulsion. The patient suffers a temporary aberration of mind. He becomes maniacal or simply bewildered and stupid, and afterward has no recollection of what occurred during the attack. In this class of cases the lesion is in the frontal lobes.

Partial or Jacksonian epilepsy may arise from traumatism of any degree of severity—from a slight injury to the integument, to the most violent injury, or may appear weeks, months, or even years after the accident which was the original cause. The direct agent in producing the epileptic seizures may be a spiculum of bone, a dense cicatrix, a depressed fracture or a clot of blood resulting in a cyst which was the case in the patient I now present.

While the results obtained by the surgical treatment of cerebral tumors have been disappointing, most gratifying results have followed the operations of trephining in well chosen cases of epilepsy.

The statistics of Hale, White and Allen Starr show that only two per cent. of all cerebral tumors justify a surgical operation. Starr observed carefully 427 consecutive cases of epilepsy and arrived at the conclusion that 26 were of organic origin, and suitable for operation, because it was possible to locate the lesion with approximate certainty. Out of 57 cases reported by Agnew, there were only 4 recoveries, while 32 others were temporarily improved.

The ordinary type of general epilepsy is beyond surgical aid; but a speculum of bone, a dense cicatrix, a depressed fracture and a clot of blood, resulting in a cyst, are causes which are within the surgeon's power to remove.

The following rules may serve as a guide in the selection of cases.

1. Cases of ordinary general epilepsy in which the lesion cannot be definitely located, are not operable.

2. In traumatic epilepsy, when the local symptoms point to a definite locality in the brain and the scar or other injury corresponds, the trephine opening should be made at the position of the scar.

3. When the local symptoms do not correspond with the scar, the position of the scar should be disregarded, and the opening made at the point indicated by the localizing symptoms, unless it be found that the scar itself is very sensitive, and that simple pressure upon it is sufficient to bring on a fit. In this case the scar only should be excised and the result watched.

4. In epilepsy of a general type following depressed fracture, but in which localizing symptoms are absent, the trephine opening should be made at the seat of the fracture.

In examining a patient for epilepsy, the history requires the closest attention; the minutest details of the accident, notwithstanding it may have happened years before, must be thoroughly reviewed. To examine the head for scars and depressions, the scalp must be shaved. The character of the convulsions must not be received from the patient's friends, as they are usually unable to describe accurately what took place during a convulsion, their minds having been occupied in the care of the patient.

When possible, the surgeon himself should observe one of these fits, or at least have the evidence of a trustworthy nurse. Care should be taken to ascertain the part in which the aura begins, the muscles first affected, and the order in which the several areas are attacked.

Thus an aura beginning in the leg, followed by twitching of the extremity, then twitching of the arm of the same side, and finally, twitching of the muscles of the face and of speech, would indicate that the irritation began in the upper third of the Rolandic area, and traveled downward to the lower end and front of the fissure.

Having studied the character of the fits, the muscles involved and the area of the brain which is the seat of the disturbance, the question of operation is to be considered.

Case, E. P., aged 20:

In June, 1886, when 6 years old, was knocked down by a horse, the hoof of the animal striking on her head and crushing in the right parietal bone. She lay unconscious for 15 hours, and left hemiplegia lasted three weeks. Six weeks afterwards a hernia cerebri appeared and was removed by Dr. Soring, of Valparaiso, Ind,. by means of a silk ligature, the process lasting three days, and 2 1-3 ounces of brain substance being thus removed. Twenty-one pieces of bone came away at different times. In December, she was able to leave her bed, but remained very weak for about a year. After this, she gradually gained in strength, and remained apparently well between the ages of 8 and 13, when she began to menstruate.

Six months after the commencement of menstruation she began to have twitchings on the left side of the face, involving the corner of the mouth, the nostrils, the eyelid and the root of the tongue. These twitchings came on just before and sometimes just after the menstrual period. They became more and more frequent, lasting for about a week, at each menstrual period. About a year and a half before she came to me, she had a severe epileptic convulsion, lasting 15 or 20 minutes. She remained free from convulsions for a year, when she began to have them every month. The last two weeks before the operation she had them every night. The twitchings continued unabated during all of this time, always confined to the left side of her face, i. e., the corner of the mouth, the nostril, the eyelid and the root of the tongue.

Nov. 27, 1900. On examination, I found a large scar over the right parietal bone, measuring four inches in length, and an inch in breadth; it runs parallel with the middle line of the head and three inches from said line. Above this is a depression about the size of the the end of one's finger.

Operated Nov. 27. Removed a button of bone 1½ inches in diameter. The dura mater bulged into the opening, and cutting the membrane about an ounce of clear watery fluid escaped. A drainage of strands of cat gut was inserted and the wound stitched up. She made a rapid recovery from the operation.

The twitchings and convulsions stopped after the operation, until February, when she had a convulsion and also some twitchings of the face. In April she had another, and a third in June. Since then she has remained perfectly free from convulsions until the present time; viz., one year and 8 months.

Dr. Florence C. Baier has permanently located at 608 Masonic Temple, Minneapolis.

Contributions to Practical Therapeutics.

By ALBERT C. BARNES, A. M., M. D., late of Pharmacologic Institute, University of Heidelberg : and Hermann Hille, Ph. D., late of Chemic Institute, Heidelberg.

During the past eight years we have been engaged constantly in original research work in chemistry and experimental therapeutics in America and at the Universities of Wurzburg, Berlin and Heidelberg. The results of this work, notably that done at Heidelberg, have been published in German scientific journals, whose pages are reserved for the record of original experimental investigations conducted principally in the laboratories of European universities. Most of our work has been of a purely scientific character, but nevertheless interesting to the modern physician. For instance, we have shown for the first time the exact location of the convulsion center; suggested and proved practically that cocaine is the most rational antidote in cases of morphin poisoning (since corroborated by Professor Reichert, of the University of Pennsylvania), and have shown that the urea group of bodies may be produced synthetically by new and original methods; this last-mentioned work was suggested to us by Dr. Th. Curtius, professor of chemistry at the University of Heidelberg, and was carried out in his laboratories.

The object of this communication is to call the attention of the medical profession to four new synthetic compounds (produced for the first time by ourselves), which after extensive clinical tests in the United States and Europe have proved to be of more than ordinary practical value in the treatment of disease. In accordance with the code of ethics of the medical profession we have refrained from patenting these products and they are, therefore, eligible to incorporation into the United States Pharmacopeia as official standard remedies.

The chemic methods of production of these compounds have been published by us in detail in various journals, but the essential features of them are herewith presented.

A Substitute for Silver Nitrate.—This compound which is chemically silver vitellin (a dark brown powder), contains 30 per cent of silver—twice the quantity in any silver proteid heretofore produced; the significance of this fact is apparent when it is recalled that the therapeutic value of a silver compound depends upon its silver content, i. e., the greater the amount of silver the greater its therapeutic value.

Silver vitellin does not precipitate albumen or sodium chlorid, hence it differs from silver nitrate in that it has no coagulating effect upon mucous membranes and is not chemically changed by their secretions. A further advantage of silver vitellin over silver nitrate is that the action of the latter is confined to the surface of mucous membranes, whereas silver vitellin has an intensely penetrating action (without causticity or irritation) whereby the antiseptic effects of silver are exerted deep into the submucous structures, where, as is well known, gonococci and other pathogenic organisms find and maintain a lodgment in spite of energetic measures to eradicate them. That silver vitellin possesses this penetrating action to a much greater degree than any other agent may be easily proved by immersing a thick strand of catgut in a solution of silver vitellin for a few hours, after which upon cutting the catgut it is seen to be im-

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1 Presented at the third annual meeting of Am can Therapeutic Society, May 14, 1902, at New York.
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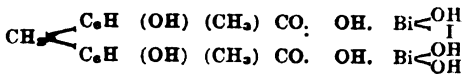
Archiv fur exper. Path. und Pharmakol.

pregnated through and through with the silver.

Clinical results indicate that silver vitellin will replace the other silver compounds in the treatment of gonorrhea, and in diseases of the eye, nose and throat. In forty cases of gonorrhea treated at the University Hospital by Dr. H. M. Christian, surgeon-in-chief of the genitourinary department, cessation of discharge was obtained in fifteen cases within ten days. Although the strength of the solution employed was as high as 5 per cent, in no instance did it produce irritation, but was of distinct value from the start in allaying inflammation, diminishing the discharge, reducing the number of gonococci and shortening the duration of the disease. Dr. George Knowles Swinburne, of New York, treated sixty-six cases of gonorrhea at the Good Samaritan Dispensary with our silver compound. Dr. Swinburne states: "In sixty-four of these cases unpleasant symptoms were done away with entirely, the amount of discharge was markedly diminished from the start, the gonococci were reduced in number, and the course of the disease shortened; the silver solution is not in the least degree irritating." A similar trial of our silver compound was made by Dr. Edward Martin, professor of clinical surgery, University of Pennsylvania. Professor Martin authorizes us to quote him as follows: "I consider your silver preparation the best I have ever used; it is remarkably effective and absolutely nonirritating." In the above cases the strength of the silver solution used was from 1 per cent to 5 per cent by hand injections, deep instillation or irrigation. Complications such as swelled testicle, bubo, etc., never occurred, and the symptoms of inflammation—pain, chordee, ardor urinæ, etc., were completely controlled by the injections. It was also used, in strength of 1 to 1,000, for irrigating the bladder in cases of cystitis, with excellent results.

The solubility of silver vitellin is remarkable—one ounce of it is completely soluble in less than a dessertspoonful of water; consequently, it may be employed in solution in any desired strength. Because of its noncaustic, nonirritating and deeply penetrating action and because of its high content of silver (nearly one-half that of silver nitrate) it is safe to predict that silver vitellin will revolutionize the treatment of many inflammatory diseases of the eye; indeed, clinical tests thus far made in cases of ophthalmia neonatorum, purulent conjunctivitis, dacrocystitis, etc., bespeak for silver vitellin a unique field in ophthalmology.

A New Dry Surgical Dressing—This compound, which is a dusting powder, is chemically mono-iodid-di-bismuth-methylene-di-cresotinate and has the formula



$$\mathrm{CH_2} < \begin{matrix} \mathrm{C_6H\ (OH)\ (CH_3)\ CO.\ OH.\ Bi} <^{\mathrm{OH}}_{\mathrm{I}} \\ \mathrm{C_6H\ (OH)\ (CH_3)\ CO.\ OH.\ Bi} <^{\mathrm{OH}}_{\mathrm{OH}} \end{matrix}$$

This body is a pink, impalpable, odorless, tasteless and insoluble powder containing 45 per cent of bismuth, 15 per cent of iodin and 3 per cent of formaldehyd in definite chemic combination.

It is a well-known chemic law that when iodin and formaldehyd are combined, as they are in this compound, the iodin and formaldehyd are gradually set free by the chemic and physical conditions present on wound surfaces; this fact is easily demonstrable experimentally and clinically.

The effects of this compound on a wound-surface are those of bismuth, iodin, formaldehyd and cresotinic acid, i. e., antiseptic, astringent-dessicating and granulation-producing.

For the past year the clinical effects of the powder have been studied at various hospitals in Philadelphia, New York, London, Berlin and Munich, as a primary dressing after operations and in the general class of out-patient surgical cases in which are present active inflammatory processes accompanied by disorganization of tissue and excessive discharges. In the postoperative cases, union by adhesion was the uniform rule. The employment of the powder in infected wounds (burns, scalds, abscesses, suppurating surfaces, leg ulcers, etc.,) showed remarkable effects in checking pus formation, drying secretions and in promoting granulation and cicatrization.

At the out-patient department of the Pennsylvania Hospital, where the powder has been tried side by side with iodoform, aristol and several other dusting powders, it was noted our compound uniformly cleans a wound better than any of the others, has an equal if not greater influence upon granulation and induces more rapid healing. In no case have toxic effects of any kind resulted, nor has it been necessary to discontinue its use because of disagreeable symptoms. The powder is absolutely nontoxic used externally or administered internally to dogs, in doses of thirty grains three times daily.

An Easily-Assimilable Organic Iron —This iron compound, which we designate, tentatively, iron vitellin, has the elementary percentage formula C47.51 H5.1 N17.14, Fe8 S.83 O21.42; it is a red powder freely and completely soluble in water forming a beautiful clear red solution, neutral in reaction, tasteless and iron peptonate and the large number of

Practically all the so-called "organic" iron compounds heretofore produced synthetically are nothing more than simple combinations of iron salts with albuminoids; that this is true of ferratin, iro npeptonate and the large number of similar preparations may be readily proved by the addition of a solution of silver nitrate, which reagent precipitates albuminoids. With our iron compound, however, silver nitrate causes no precipitation.

Now, a few words as to the meaning of the term "organic iron": This designation, all authorities assert, should be restricted to those compounds in which the characteristic iron tests are not produced by certain reagents. The most reliable and the most delicate of these tests is what is known as MacCallum's and consists in adding a small quantity of a ½ per cent solution of hematoxylin to the iron to be tested; if the iron is inorganic, a characteristic blue-black color is produced, while if the iron is organic, no color reaction results. This test applied to the best-known of these alleged "organic" iron compounds produces the characteristic hematoxylin reaction for inorganic iron; on the other hand, our iron compound does not yield this reaction, so that it is in the most accurate scientific sense a true organic iron.

Authorities teach that organic iron has by reason of its chemic construction the following clinical advantages over inorganic iron: It cannot provoke digestive disturbance, is not astringent, is more readily assimilated, and is in the complex form required by the tissues.

Our iron compound further differentiates itself from ferratin, iron peptonate, etc., by the fact that it is not decomposed in the stomach. Digestion of our iron compound with an artificial gastric juice for four hours at body temperature fails to split off even a trace of iron; hence it cannot be astringent or irritating to the gastric mucous membrane as are the other compounds.

The greater facility with which iron vitellin, compared to Blaud's mass, iron peptonate, etc., is assimilated, we have demonstrated by animal experiments; there is three times more of iron vitellin absorbed and stored in the liver than of the usually-employed forms of iron.

Clinical experiments with iron vitellin have been made by several physicians in private practice and at the medical out-patient departments of the University and Polyclinic Hospitals, the detailed records of which will be published elsewhere. In eight cases of severe chlorosis, two of secondary anemia, and two of primary anemia due to diminution of the total quantity of blood, restoration of normal conditions occurred in from ten days to six weeks. To quote from the hospital records made: "Physically the patients were improved, and with the increase in appetite felt better and more buoyant and the clinical results are, on the whole, better than those obtained from any other form of iron."

A summary of the results obtained thus far indicate that the advantages of iron vitellin over Blaud's mass, iron peptonate, etc., consist of its more easy assimilation, its freedom from digestive disturbances and its greater general beneficial influences upon the signs and subjective symptoms of blood impoverishment.

An Intestinal Antiseptic and Astringent—This is hexamethylenetetramin tannin proteid and contains 50 per cent of tannin and 10 per cent of hexamethylenetetramin in definite chemical combination. It is a well-established fact that tannin is one of the best intestinal astringents available if it can be so combined that it passes out of the stomach into the intestines chemically unchanged and gradually releases free tannin by contact with the alkaline intestinal contents. As pointed out by Professor Nicolaier, of Gottingen, and more recently by Loebisch, of Innsbruck, hexamethylenetetramin exercises potent inhibitory influences upon intestinal putrefaction and that under its influence indican, the acknowledged index of intestinal decomposition, disappears from the urine.

Clinicians have availed themselves of the use of this drug in cases of typhoid fever because it sterilizes the urine to the extent of complete disappearance of typhoid bacilli from that fluid.

The essential feature of our compound is that is so combines a nontoxic antiseptic and astringent that the compound is uninfluenced by the gastric juice, but is gradually split up into its components as it passes downward through the intestines; hence it cannot disturb the stomach and it exercises antiseptic and astringent properties in the lower part of the intestinal canal—facts easily demonstrable experimentally and clinically.

This remedy has proved of marked value in a large series of cases of acute catarrhal enteritis, chronic diarrhea due to lesions in both the small and large intestine and in infantile diarrhea; it produced prompt cessation of bowel movements and relief of symptoms of inflammation. Its inhibitory influence upon intestinal putrefaction was established by careful observations in severe cases of typhoid fever in the Philadelphia Hospital, in which it was noted that after the administration of several one gram doses of the drug, indican, which had previously been present in large quantities, disappeared completely from the urine.

The field of application of this compound is typhoid fever and inflammatory diseases of the intestines associated with diarrhea and the symptoms of autointoxication dependent upon intestinal putrefaction. Hexamethylenetetramin tannin proteid is a yellowish brown fine powder which is odorless and tasteless.

All of the above compounds are the results of long and careful detailed study of the laws of the relationship between chemic construction and therapeutic activity; all of them are of the scientific character which entitle them to official recognition in Pharmacopœia. Inasmuch as these produts fulfill acknowledged desideratums in therapeutics and embody clearly demonstrable advantages over remedies for similar purposes now available, they constitute material contributions to the progress of medical science.

Yellow Fever in Europe.—A General Historial Review.

By J. M. Eager, Passed Assistant Surgeon.

Although the fact is well known that at various times yellow fever has gained a foothold in Europe, no adequate idea can be had of its widespread prevalence at many places where it has been introduced except by a careful review of the literature of the disease. The extent of some of these accidental epidemics of yellow fever occurring outside of the regions of its periodic prevalence is made evident when it is remembered that at Barcelona, Spain, during the funereal epidemic of the year 1821, approximately 25,000 persons died within five months of yellow fever, and that, at Lisbon, Portugal, during the year 1857, in an epidemic of five months' duration, there were over 13,000 persons stricken with the disease, the mortality being almost 50 per cent.

An outbreak of bubonic plague in a European city as disastrous as, for example, the yellow fever epidemics mentioned would certainly give, rise to the justifiable apprehension that the disease was likely to overrun the Continent.

That the mosquito conveys the yellow fever infection, according to the theory of Finlay, appears to be satisfactorily proved. In event of the fact being further established that the mosquito is the sole agent in the transmission of the infection of yellow fever from man to man, it would be interesting to know what particular mosquito was instrumental in the spread of the disease after its introduction into European ports. From the review of the literature of the subject, and such inquiries as have been made in the preparation of this writing, it has been impossible to determine whether the Culex fasciatus of American authors is exactly represented in the description of the European mosquitoes. Stegomyia teniati does not appear in any accessible European nomenclature. A. Lutz, director of the municipal bacteriological laboratory of Sao Paulo, Brazil, after careful entomological examination, has determined that the South American mosquito descriged as C. toeniatus is the same as C. fasciatus of North America. De Gouvea states that the yellow-fever mosquito described as C. toeniatus is the occurring and named in Southern Italy as C. elegans, Ficalbi, and in Portugal as C. calopus, Hoffmannii. It does not appear, however, from the systematic revision of the culex family, made by Ficalbi in his latest work (1896), that C. elegans, Ficalbi, and C. calopus, Hoffmannii, are the same. Miegen states that C. calopus, occurs in Portugal. Rondani accepts the species for Italy, but does not give a full description. Ficalbi records that Stephens mentions C. calopus in the list of English mosquitoes, but marks it with an interrogation point. Writing of C.elegans,Ficalbi says that he has found this mosquito in Italy, but not in large numbers. He has described the species under the name of C. elegans, because, after rigorous inquiry he has been unable to identify the mosquito with any described by authors who had previously prepared classifications. Ficalbi adds that he often asks himself if, "per adventure, C. elegans may not be the C. calopus of Meigen," but is "constrained to make a separate species because of slight differences in the zoological descriptions."

In fixing upon the guilty mosquito, there is abundant variety to reckon on. Ficalbi, in the treatise mentioned, describes 60 species of mosquitoes inhabiting Europe—53 belonging to the genus culex, 5 to anopheles, and 2 to aedes.

Should it be found on careful comparison that the American mosquito that conveys yellow fever does not correspond with any European member of the culex family, there still remains the possibility that a European mosquito of a different species may perform the office of carrier of yellow fever contagion, or that stowaway mosquitoes from the Western Hemisphere accompanying pest ships might be landed in Europe, reproduce their kind for a few generations, and incidentally continue the spread of yellow fever.

Without taking into consideration the cases that have occurred on board vessels in ports and at quarantine stations, in Europe, yellow fever has at times been present in Portugal, Spain, France, the British Isles, Italy, and Austria.

The earliest authentic appearance in Europe was in 1723, at Lisbon, Portugal, an epidemic which attained great proportions. Portugal was free from the disease from that year until 1850, when there were a few cases at Oporto. In 1851 there were 57 deaths from yellow fever at Oporto. A third epidemic occurred at Oporto in 1856 and resulted in 120 cases and 63 deaths. In the year of Portugal's greatest epidemic of yellow fever (1857) there were at Lisbon, where the first focus formed, 13,757 persons sick with the disease, of whom 5,652 died. In the neighboring city of Olivaes 112 cases of yellow fever occurred. The next year a few cases were reported in Portugal and the Azores, and since then yellow fever is said to have been absent from the country.

Spain is the European country whose yellow fever history is the most extensive. It is of practical bearing to note that often when the most rigid sanitary precautions were being taken to prevent the importation of the disease, the contagion was introduced into Spain by smugglers in surreptitious communication with suspected vessels, or clandestinely landing infecter goods thus confirming by the history of Spanish epidemics, the wisdom of the measures that have of late been taken by the Marine-Hospital Service in making a patrol of the Florida coast with a view to a surveillance of small craft from West Indian waters.

There is no accredited record of yellow fever having appeared in Spain prior to 1738, when it was imported into Cadiz from America and spread to other cities of Spain. In 1733, 1741, 1744, 1748, 1749, and 1753, epidemics of greater or lesser severity prevailed, that of 1741 causing 10,000 deaths. After more than half a century of immunityfi an outbreak occurred in 1800, spread widely, and numbered 17,500 persons as its victims.

The next year and the second year after, the disease renewed its ravages. In 1803, at Malaga, 6,884 persons died of yellow fever. In 1804, there perished 7,726 persons. In the latter year, the disease extended to many cities of Spain. Again, in 1808, 1810, 1811, 1812, and 1814, there were epidemics of varying virulency. At Cadiz in 1819, 40,000 cases of yellow fever were recorded with a mortality of 20 per cent. The prevalence at Barcelona in 1821 was appalling in its results. In five months, 25,000 persons died of the disease. The infection spread to other cities, killing 4,500 at Tortosa, and destroying one-half the inhabitants of Palma, capital of the Balearic Islands. In 1823 and 1829, the malady was present in Spain, but afterwards there was an interval of immunity extending to 1870. During the summer of 1870, the contagion was introduced into Barcelona and, in the months of August and September, between 25 and 40 persons fell prey each day to the disease. The latest recorded occurrence in Spain was in 1878, when yellow fever invaded the capital, Madrid, and attacked 50 persons of whom 30 died.

It is stated in an early history of the city of La Rochelle that the first importation of yellow fever into France, and consequently into Europe was in 1700, but the record lacks scientific authority. The first properly verified occurrence was at Brest, 1802, when 23 deaths took place in the hospital of the lazaretto, and several cases broke out in the city. The same year yellow fever was present in quarantine at Marseille. At Marseille again there were cases in the city in 1821, and at Brest in the harbor in 1839. Sanitary interest, however, from a yellow fever point of view, is centered on the epidemic at Saint Nazaire, in 1861. A sailing vessel introduced the disease from Havana. The manner in which it spread throughout the shipping of the port, infecting seven other vessels, with a result that 40 persons fell ill of yellow fever and 23 died, has led a recent writer (de Gouvea, Le Bulletin Medical, October 12, 1901) to observe that the facts, in his opinion, adapt themselves perfectly to the theory of the propagation of yellow fever by mosquitoes. On different occasions, after the epidemic at Saint Nazaire, yellow fever occurred on board ships in French harbors, but did not appear ashore, except in 1870, when a seaman from a pest ship died of yellow fever in a civil hospital at Marseille.

The yellow fever history of the British Isles is limited to five appearances of the disease between the years of 1817 and 1865, in the harbors of Falmouth, Southampton, and Swansea.

At Leghorn, in 1804, yellow fever was introduced by a Spanish vessel from Alicante and Cadiz where the disease was epidemic. The disease prevailed at Leghorn for four months, causing not less than 700 deaths, and according to one author as many as 1,900. At Torre Annunziate, a city of 20,000 inhabitants situated in the province of Naples, there was in 1883 an epidemic prevalence of a disease which was pronounced by several competent medical men to have been yellow fever. Of 13 cases presenting clinical features at least closely resembling yellow fever, seven died. A full epidemiological account of the disease, gathered from the municipal archives of Torre Annunziata, has been prepared for the present writing. This interesting epidemic outbreak was completely lost sight of, and for the time apparently forgotten in the overshadowing gloom of the terrible cholera epidemic 1884, at Naples, on the eve of which it occurred.

The history of yellow fever in Europe closes in 1894, with the death from that disease of two seamen in a hospital at Trieste. The contagion was brought to Austria from Brazil by two sailors who landed from a pest ship at Genoa and went by land to Trieste.

In the examination of literature for the preparation of this account, it was found that the epidemiology of yellow fever is not anywhere collected in a single writing. It is scattered through many books. A comprehensive survey of the subject is of more than antiquarian interest. It has at least the value of teaching that the disease is capable of extending under suitable conditions, and prevailing epidemically in Europe, as it did in Philadelphia and other northern cities of the United States, a century ago.

With a view to presenting in a summary manner the epidemiology of yellow fever in Europe, this account has been prepared from the extensive and scattered literature of the subject.

Some Pathological Conditions to Which the Miner is Peculiarly Liable.

By J. W. Coleman, M. D., Jerome, A. T.

The miner's work is peculiarly dangerous. Neither his surroundings nor his manner of doing his work are conducive to health. This paper, however, has nothing to do with the miner's many injuries caused by falling rock and accidental explosions, but more particularly with the pathological changes found in examining men who for years have followed mining continually. We may for convenience divide these conditions into *acute* and *chronic*.

Powder smoke headache is the most frequent acute trouble. Where giant powder is used the patient presents all the symptoms of cerebral congestion. The eyes are watery and bloodshot, pupils contracted. The patient has flashes of light before the eyes, intense headache, restless, twitching muscles, frequent nausea and vomiting, possibly due to stimulation of the vomiting center in the medula ablongata. The face is pale; the pulse rate and wave are both increased. The first few whiffs of powder smoke may make the face congested, but this soon passes away. Every beat of the heart causes a throbbing pain in the head and humming in the ears. Sometimes the patient staggers like a drunken man, and I have known a mine foreman to discharge one of his men whom he saw staggering and reeling on the way to the bunk-house. Men get accustomed to powder smoke, just as patients get used to taking nitro-gylcerine, and the dose must be increased in order to get the desired effect. So in powder smoke, if the miner is in the smoke more than usual he gets the headache, as when he first began mining. Handling giant powder will also cause a headache. It will act as a severe local irritant poison, especially about the eyes, giving rise to severe conjunctivitis and œdema. A combination of acetanilide, citrated cafeine, soda bromide and gelsemium will quickly relieve this distressing headache. I prefer the powdered medicine to the tablets because of its quicker action.

Sudamina is another acute trouble of which I have seen a few cases. All were miners, working in a very hot mine; all were new men. The sweat glands seemed to secrete more sweat than the ducts could carry off. Small blisters formed with no inflammation and but little itching. The skin was rough with a pebble-like feeling. The men changed work, no medicines were given, the blebs dried up and scaled off.

The chronic troubles are more serious.

Chronic laryngitis is possibly the most frequent. In my opinion it is largely caused by the peculiar manner of expelling air from the lungs. With nearly every stroke of the hammer the miner expels the air with a rasping noise which irritates the vocal membranes. Nearly all miners while drilling are mouth breathers. Sometimes the air is cold and dust-laden, which increases the trouble. It will last as long as the cause exists. Medicines are palliative but not curative.

Chronic bronchitis is another frequent trouble of the miner. His work tends to produce it. Where compressed air is used in drilling the air is extremely cold. His habit of mouth-breathing, sudden changes from a warm drift to a cold shaft, the sudden falling or rising of blood pressure caused by the rapid changes in atmospheric pressure, breathing dust and smoke-laden air all tend to produce a chronic catarrhal condition of the bronchi with morning cough and free expectoration of mucous streaked with pus. This condition is not so dangerout in itself, frequently clearing up nicely by simple rest and outdoor life, aided by a little medicine, yet the man who has an inflamed area in his bronchi is always in danger because that mucous membrane of lowered vitality is a suitable nidus for tubercle bacilli to lodge and grow. Perhaps this condition can be prevented by teaching the men how to breathe, remembering that God breathed into man's nostrils and not into his mouth.

Miner's consumption is but a step along the same line. I have nothing new to add to this, unless the statement that the lungs take on the color of the material in which the man is working. The lungs of the old coal miner are as black as a lump of coal. The lungs of the hard rock miner are usually grey, especially about the edge, frequently imparting to the touch a gritty, sandy feeling.

I wish to call attention to a peculiar condition of the eyes that I have noticed in old miners and also in blacksmiths; a trembling, twitching, restless, constantly moving condition of the eye balls, a snappy movement of the eyelids. I have noticed this in hundreds of miners and several blacksmiths. It does not seem to interfere with vision, so far as I know. In the miner I think it is caused by the flickering candle-light. In the blacksmith it is possibly caused by the forge fire.

Most of the miners work on Sunday. Men have come to me for treatment who have worked over a thousand shifts without missing a day, sometimes doing overtime. These men are simply worn out. Some trifling ailment and the man either quickly dies or is dangerously ill. His vitality exhausted, his surplus energy used up, he has no recuperative power. The Almighty worked six days and rested on the seventh. When he made man he did not endow him with power and endurance greater than a God. The remedy is self-evident.

For some months I have been conducting a series of examinations and urinary tests in order to detect chronic mineral poisoning in miners and smelter men. At present I can only say that I have undoubted evidence of general systemic poisonings by antimony, arsenic, copper and lead. At some future time, when the accumulating evidence is more complete, I will make a report.

In my opinion, it is our duty as physicians, not only to endeavor to cure our patients, but to prevent their getting sick. Teach them, then, how to live and how to breathe, and much of the sickness is prevented.—Col. Med. Jour.

Complications in the Liver Resulting from Heart Disease.

By William F. Bay, M. D.

In a study of the complications in the liver resulting from heart disease, the anatomic peculiarities of this organ should be considered, viz: the blood supply, which is through the hepatic artery, a branch of the coeliac axis. (This vessel. supplies mainly the nutrition of the coats of the vessels, the ducts and the investigating membranes and possibly some of the capillaries of the lobules.) And the portal vein, composed of the splenic gastric superior and inferior mesenteric veins which supplies the capillaries of the lobules. Thus is it evident that the blood supply for functional use is obtained from the digestive tract and any interference with the circulation in the liver will also impair the circulation of the digestive tract.

Physiologic Considerations: The functions of the liver are secretory and excretory in addition to the production and storage of glycogen and also urea. The bile is the product of secretion of this gland which contains cholesterin and allied products of metabolism in solution and in this manner assigns to the liver its excretory properties, thereby making the liver an organ of many useful functions to the human economy; in addition to the formation of a secretion so essential to normal digestion. The relationship between the digestive tract and the liver from an anatomical and physiological standpoint is manifestly intimate so that disease in one, from any cause is liable to affect or aggravate an already existing trouble in the other.

In chronic valvular disease of the heart, which occasions profound mechanical disorders of circulation, the liver is one of the first to evidence failing heart power owing to its natural sluggish venous circulation. In diseases of the left heart the lungs are first to suffer congestion; but when the right heart fails the liver becomes greatly engorged and in some cases it is said to pulsate. The swollen liver cells and engorged blood vessels resulting from the above conditions are prolific of many changes from the normal. We have a thickening of the biliary channels, which with a thickening of the bile causes obstruction of the biliary capillaries and consequent jaundice. Chronic congestion is causative of the nutmeg liver, red atrophy, cyanotic induration and secondary cirrhosis followed by ascites, which results from a chronic peritonitis, brought on by obstructing the circulation in the liver.

Acute endocarditis attended by embolism and thrombosis is more often followed by lodgment of emboli in the lungs, spleen kidney and brain, than the liver, no doubt owing to the mechanical arrangement of the blood supply.

To summarize, the circulation is naturally sluggish because the portal blood first passes through the capillaries of the digestive tract. Chronic congestion due to heart disease is causative of the nutmeg liver, red atrophy, cyanotic induration and secondary cirrhosis. Emboli from septic endocarditis are exceptional. —Columbus Med. Jour.

The Pretubercular State.

By W. S. Philips, M. D., Bell Center, O.

Since the savage in his native environment is free from tuberculosis, we must conclude that certain conditions of civilization are responsible for its development. That it is not due to the manner in which our bodies are clad, the comfortable homes in which we live, nor to the progress of intellectual development per se, is too evident to need refutation. However, as a truth of common observation, certain external and systemic conditions favor its development; some of the prominent of which are high relative humidity of the atmosphere, improper relation of the height to the weight of the body, senility, pregnancy, imperfect digestion, and certain diseases, as measles, scarlet fever, smallpox, typhoid fever and nephritis.

That there is an ultimate common state prior to the development of tuberculosis into which all of these external and internal influences converge, is apparent, using analogous operations of nature as to cause and effect, as our basis of judgment—otherwise, the accredited results of observation are without any foundation in fact. Susceptibility is but a circumstance or combination of circumstances of human existence, and in tubercular infection will be found to be as simple as wound infection when properly elucidated.

The first link in the chain of evidence relates to food ingestion. Among the common domestic animals we find the cow readily tuberculosable, while the horse is rarely so. In the performance of their bodily functions three striking distinctions are observed. The former habitually exhales organic matter with the expired air. The horse is an habitual sweater, while the cow is not, and the horse is protected from the results of overfeeding by attacks of acute indigestion and colic, a rare occurrence in the cow. Again the cattle on a thousand hills, whose provender is such as nature furnishes in its original state are relatively free from tuberculosis, while the stall-fed herds of the Queen of England became the wholesale victims of slaughter. Also the cows of the dairyman whose sole income is the product of the dairy are more frequent victims than that of the farmer whose herd is only an incident of his industry. The fact that feed makes milk and milk brings ready cash impresses itself more forcibly on the former than on the latter.

A number of children having spinal tuberculosis with whose home life the writer has been familiar from their birth furnish similar examples. The products of the confectioner and the pastry cook have been almost constant elements in their dietary, and their life history has been characterized by attacks of acute indigestion, sore throat, decayed teeth, foul breath and feelings of indisposition produced by the indigestion of food beyond the requirements of the system and made with especial reference to gratify the sense of taste rather than contributing to the actual needs of the body. As a rule this is the manner in which people, both young and old, are fed, both in the families of the rich and among the humble tenants of the cottage.

With the savage in his native state, the case is different. His stomach is not made the receptacle of that which is prepared with reference to his gustatory sense except in so far as it may satisfy the natural feelings of hunger, the circulation neither being flooded with a pabulum for which the economy has no use, nor with the products of fermentation and decomposition of the ingested food.

Also it is a matter of observation that

a functionless skin is too frequently associated with the development of tuberculosis to be a mere coincidence—a condition referred frequently to an attack of some eruptive disease in childhood, so that conditions impairing the function of elimination favor the production of tuberculosis. A damp, cool atmosphere, permitting the rapid radiation of bodily heat and contracting the cutaneous capillaries, reduces the function of the glands of the skin to a minimum.

The population of our penal institutions inhabiting the damp dungeons of their abode develop a mortality from tuberculosis that is simply frightful, and the history of the case in the outside world, unless occurring as an immediate sequel to some of the diseases heretofore mentioned, traces its origin to the late winter or early spring when the air is saturated with moisture, and the function of the skin is at a low ebb, as can be demonstrated upon the body of any healthy person. Pregnancy, owing to its derivative effect upon the circulation, depleting the cutaneous vessels, produces the same effect upon the skin, as also do the retained chemical products usually excreted by the kidneys, through their effect upon the nervous system, in inherited or acquired kidney insufficiency. Inflammatory diseases of the skin such as measles and smallpox which are found in the category of remote causes of tuberculosis, evidently injure and destroy the glandular structures of the skin and operate in the same way. Then stating the proposition conversely, it is equally true in pathology as in mathematics, that two quantities equal to each other are equal to the same thing.

In the case before us, whether the natural organic waste of the body is denied an exit or the circulation overloaded with nutrient pabulum or nutriment unprepared for its reception into the circulation, the resulting phenomena observed are identical—the disturbance of digestion being the usual intermediate difficulty commonly noticed. Given the case of a healthy child having unrestrained access upon a single occasion to that which is attractive to the taste; the next morning will reveal upon the most superficial observation a coated tongue and foul breath. The same things are noticeable in all of the circumstances in which the process of oxidation is quickened, as in fever or when the function of the skin is compromised such as in atmospheric conditions, senility, Bright's disease, measles and pregnancy; no taint of fetor being found in the blood of the latter and certainly in none of the others.

Or the case of an individual whose height is out of proportion to his weight. Pound for pound he requires the same amount of nutriment as the individual whose corpulence is up to the standard, while all the glandular structures of his body have length without corresponding circumference, so to speak, with a consequent diminution of vital energy on account of which the food products are thrown into the circulation in an unfit shape for its reception, there to be disposed of in some other than the usual way.

Some recent observations seem to indicate that in pulmonary consumption the interchange of gases is much more active than ordinary, nor is it to be wondered at that the circulation, loaded with organic debris and food products, both imperfectly prepared and in excess of the needs of the body, should manifest an extraordinary hunger for oxygen, increasing the amount of carbon dioxid in proportion.

That the coated tongue and teeth and the offensive breath are but different expressions of the same thing, is evident from the fact of both being produced by an identical chain of circumstances. That the former is a deposit of semi-solid organic matter, escaping from the blood and carried out by the expired air, is certain because of a like behavior of other impure gases and because of its having no other possible origin. That the fetid breath is the result of decomposed organic matter is indicated by the sense of smell and that the place of lodgment and process of decomposition occur somewhere in the respiratory tract and not existing in a state of decay while suspended in the blood.

There is a point in the terminal bronchi beyond which there is no epithelial lining and beyond which nature is almost powerless to remove any foreign material save by absorption, as indicated by the invisible disappearance of the exudate in pneumonia and the tedious process of removing insoluble particles of dust inhaled, lasting for many months in the case of the coal miner. In the peribronchial tissue of the terminal bronchi is usually to be found the first evidences of tubercular invasion.

Thus associating the circumstances in the history of the individual who sooner or later becomes tubercular with the known pneumonia of its development, we can only arrive at the conclusion that in the morbid conditions before mentioned the bacillus is furnished a culture-medium not essentially changed from that in which it is propagated outside the body, and the place in the terminal bronchi where it may remain until liquefaction occurs, then by absorption to find entrance into the body, inciting inflammatory reaction either immediately or remotely as the vital processes are able or unable to hedge in the invader by the barrier so produced.—Med. Times.

Enlarged Turbinals.*

By Ola S. Hendrixson, M. D.

It is not necessary to speak of the anatomy or pathology of these enlarged turbinals of the nose. By my experience in this special line of work I have found that the majority of patients present some form of hypertrophy of the nasal mucus membrane usually with more or less thickening of the middle and inferior. turbinal tissues. What shall we do to reduce these thickened and enlarged turbinals? Information from literature on the method of treatment varies with each writer. By using cocain we are enabled to view the whole of the nasal cavity, and no morbid condition should escape out notice. This thickened condition will cause more or less obstruction to nasal respiration, resulting in many unpleasant symptoms. This obstruction may give a soft and spongy sensation with the probe. Cocaine will contract the swelling, giving complete relief to the nasal obstruction. This is thought to be an early stage of the hypertrophy before much tissue increase has taken place. Or there may be firmer resistance to the probe. Cocaine will contract only partially. Or the bony element may enter into this obstruction to such an extent as to form a bony substance, which must be removed before relief can be had. In most cases the object should be not to destroy tissue, but contract the blood vessels, diminish nutrition and thus counteract the hypotrophy. Great relief is sometimes found by simply using washes and sprays. At other times galvanic cautery treatment is required, making a linear furrow through the tissue to the bone, hoping when this heals to contract the tissue and thus reduce the hyperthropy. In my hands this has caused too much sloughing. Sometimes a bead of chromic acid applied to the surface of the most prominent part of the hypertrophied tissue gives excellent results. If the bony element predominates a cutting instrument will be required; such as the specially-devised scissors, saw, snare or galvanic cautery must be used. The leading specialists claim they give the operator good control of the amount of tissue to be removed, and they can be used in the treatment of any part of the turbinal bodies. Submucous cauterization is being used by some where there is much new tissue formation with reports of good results. The principle of this procedure is rational, the technique practical and may be the best method to pursue in some cases.—Columbus Med. Jour.

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*Read before the Columbus Academy of Medicine January 6, 1902.

Constipation and its Treatment.

By FRANCIS LEE THURMAN, M. D., Keswick, Va.

Among women, nothing plays a greater *role* in their weal or woe than constipation. In my experience in practice, two-thirds of the women in the land are in degree constipated from moderate costiveness to the extreme and incredible condition of an action in ten days.

Causes.—By far the most frequent cause is habit. Going back of habit and hunting a cause for the habit, I would say that, in my opinion, the unattractiveness of the water-closet is the most potent factor in this cause. Let a water-closet be cold, damp, odorous and out of the dwelling, and not one woman in ten will have the moral courage to obey the first call of Nature in winter. One, yea even one, disregard of that summons starts a train of results that only the experienced physician knows too well. As regards other causes, mention might be made of what the laity call "torpid liver," imperfect secretion of bile, or, if sufficiently secreted, a catarrhal condition or other obstruction to the outflow of bile, thereby lessening the supply to the intestines. And lastly, not to go into minor details, inadequate muscle-tone in the intestinal walls, thus rendering the peristaltic movement imperfect and stagnation in the intestines of fecal matter.

Results.—Even in moderate costiveness some change in physical condition may be noticed, such as feeling of heaviness about the head, lack of sense of well-being, disagreeable taste in the mouth, and some impairment (noticeable or unnoticeable) of the faculty for quick, active, energetic mental activity.

Passing from costiveness to constipation the above symptoms would be intensified with probably a marked dullness about the head—often headache—and from this to severe constipation when the results of auto-infection and intoxication are often marked, the results of which seem only dependent upon a peculiar personal equation, differing largely with the individual attacked. Often in the severer forms the large intestines become greatly dilated and the nerve-tone is so abolished that peristaltic movement—the *vis a tergo*—which causes evacuation through muscular power, is completely destroyed.

Treatment.—For the milder forms of costiveness I recommend no medicine whatever, nor have I found any necessary where the patient proved sufficiently in earnest in these simple cases to follow instructions. And right here is one of our hardest fights, to make a slightly-sick patient view her case seriously enough to take the necessary precautions to prevent a more serious one following. My first instruction is a cultivation of regularity in habit—"Go regularly to the same place at the same time each day"—and the patient of careless habits will be surprised what difference the simple observance of this rule will make. To aid this, the diet should be as largely vegetarian as the market will afford, supplemented by the use of plenty of nice ripe fruit. Exercise is a factor which must, by no means, be overlooked, as I deem it one of the most important factors in keeping up the necessary peristaltic wave in the muscular coats of the bowels.

For the more serious cases all of the above instructions are necessary and to them I would add the habit of drinking, both at bedtime and on arising, copious draughts of fresh limpid water. This removes the mucus coating the stomach and allows food, when taken in, to come in direct contact with the digestive and absorptive cells of the stomach-walls. And last, but not least, through Auerbach's and Meisner's plexus of nerves starts a peristaltic wave which, in the healthy subject, continues its movement to the rectum. In addition, I find it necessary often in the beginning of treatment to give a combination of aloin (1.5), strychnine sulp. (1-60), and belladonna ext. (1/8), from one to two pills a half-hour after each meal, according to the exigencies of the case, reducing gradually as the case progresses to one twice a day (morning and night), then to one after supper, and finally stopping any and all. A valuable adjuvant of this is active massage before retiring.

In the very severe cases, where dilatation of the large intestine has become so great, particularly around the sigmoid flexure, that no responsiveness of the muscular power is possible, the case passes into the realm of surgery and resection of so much of the intestine as is irredeemable, is the *dernier ressort.*—*Med. Council.*

Medical Miscellany.

N. W. HOSPITAL GRADUATES. On the 19th ult. the graduating exercises at the Northwestern hospital, of Minneapolis, took place, at the hospital. Mrs. T. B. Walker, the president, was unable to be present, but her address was read by the secretary, Mrs. S. W. Melendy. Mrs. H. H. Kimball, vice-president, presided. An informal reception was held immediately after the exercises. There were six graduates who received their diplomas: Clara B. Blachley, Margaret J. Markland, Elizabeth Skavens, Julia H. Johnson, Ethel Campbell and Genevra Harrington. They wore the pretty uniform of blue and white with white cap and apron and presented a very chic appearance.

ASBURY GRADUATING EXERCISES. The exercises of the graduating class of nurses of Asbury Methodist hospital of Minneapolis on the evening of the 4th of June were held at the Franklin Avenue Methodist church. An address was delivered by Dr. R. A. Dunsmoor, followed by remarks by Rev. A. S. Graves and Dr. F. R. Woodard. Miss Jessie Burns read the class paper. Miss C. E. Bushnell, superintendent of the hospital, presented the class pins and Bishop Joyce the diplomas. Mrs. Maude Ulmer Jones and Mr. Kenyon contributed the musical numbers. The members of the class were Esther Walters, Emma E. Dennis, Jessie Burns, Margaret A. Loughbridge, Elizabeth J. Eason, Hannah Swanson, Beulah Coad and Margaret H. Hurst. Two evenings later a reception was given to the junior nurses at the Deaconess' home for the graduates.

WEAKENED AND FLAT FEET: PROPER FOOTWEAR. An exhaustive treatment of the causes of weakened and flat feet, and the remedies to restore the feet to their proper and natural function appears in the Bulletin of the John Hopkins Hospital for January.

Without attempting to enter into the theory and discussion of these troubles, we wish simply to call attention to some of the recommendations contained in this article.

Stockings should be rights and lefts for the reason that interchangeable stockings are shown to have a decided influence in forcing the big toe outward and compressing it against the other toes causing *hallux valgus.*

"The effect of the *hallux valgus* and interference with the adduction of the big toe is that we have lost a natural means of supporting the long arch and of preventing pronation of the foot. Also in walking, in the final push, instead of stepping off squarely from the end of our big toe we walk from the side, thereby losing some force and also pushing the foot into a position of adduction. This causes the whole foot to work under a disadvantage, and may be considered a factor in the causation and maintenance of weakened and flat feet."

Regarding shoes, the author of the article directs that the shapes should be adapted to the position of the foot for greatest strength which is the posi- of adduction. Children shoes are most frequently injurious. The greatest objection is that children's shoes are often made to be interchangeable on the two feet. Sharp-toed shoes and "common sense shoes" come up for their portion of the criticism.

A point of some interest is the objection to the "spring" of the shoe and to the lateral curve of the sole. The spring of the shoe is curving up of the front of the shoe so that the toe of the shoe does not touch the surface upon which the foot rests. It is introduced by shoemakers so that in walking a wrinkle may not appear in the upper. This spring or raising up of the toe of the shoe materially interferes with the downward force of the toes. What is lost in this way one may judge from the fact that the downward force of the big toe in an average man is reckoned to be 20 pounds. This downward force of the toes is largely lost, and in making a step a person rocks off from the metatarsal joints.

Together with this upward curvature in front there is also in most shoes an upward curvature from side to side so that the front rests on the ball. Now, as every physician knows, the two main points of forward support of the foot are the points just back of the big and little toes which appear as prominences with an arch between. These two prominences together with the heel form a tripod upon which a normal foot will rest. But a shoe with this ball in the center tends to weaken the lateral arch which exists between these two forward metatarsal prominences by causing the foot to adjust itself to the pressure between them. "Breaking in" a shoe is largely breaking down these two curves. the one the forwaru "spring," the other the lateral up-curving. As the author of the article says: "One must bear in mind that a shoe is never broken in without breaking the foot."

Regarding heels on shoes, five reasons arguments are given in their favor and six reasons are given why heels are objectionable,—so that the evidence is rather evenly balanced. Especial objection is made to a heel which extends out behind. Such heels are met with on some common sense shoes, and occasionally on slippers. This kind of heel adds immensely to the strain on the ligaments of the foot. A French heel is superior to such a one, but a low heel curving slightly forward under the foot is probably best.

To be sure a broad sole is commended. As pointed out above, this should be flat.

Even the effect of bedclothes is considered. In cases of injury and prolonged sickness from any cause heavy bedclothes should be supported, especially if there is already present some deformity of the foot.

In all, fourteen points are given for the selection of a proper shoe. The author advises an individual last, and gives elaborate directions for measuring the foot.

Among the mechanical devices recommended are a toe post—to be worn between the big toe and the second toe, adductor applances for the big toe and for the whole front of the foot, and supports for the arch of the foot. Accurate directions are given for making a flat foot brace.

Altogether the contribution is one of considerable practical valuile.—Medicus.

NEW FEATS OF SURGERY.

Among originalities of surgery described at the session of the thirty-first congress of the German Chirurgical Association was the case of Dr. Tietz, of Breslau, who, having removed a section of diseased bone from a woman's shin, pieced it with a joint from her great toe, thus preventing lameness.

Dr. Roth, of Lubeck, gave a demonstration of an appliance for administering oxygen with chloroform, rendering it possible to anesthetize weak-hearted persons. Other surgeons confirmed the excellent results of mixing oxygen with chloroform.

Dr. Reerink, of Freiburg, described successful operations on animals by patching stomachs with pieces of intestines.

Six surgeons—four Germans and two

Frenchmen—reported to the congress the discovery of the cancer bacillus. As each report was quite different from the others, and as none of these doctors satisfactorily demonstrated their discoveries, not much confidence was felt by the examining committee. Many experiments as to the origin of cancer are going on.

Dr. Gluck, of Berlin, gave an exhibition of a speaking apparatus of his invention, which enables patients from whom the thyro-cartilage, or Adam's apple, has been removed, to speak more or less distinctly. The apparatus works automatically by inhalation or exhalation. Dr. Gluck stated that in twelve cases it had worked well where the entire apple had been removed. One of the latter was a man 74 years old. He had successfully treated cancer of the throat in this way.

SIR HENRY THOMPSON ON DIET.

Sir Henry Thompson, who until he relinquished active practice, was the foremost genito-urinary surgeon in Great Britain and worked contemporaneously with Bigelow, is now hale and hearty at the age of eighty-two (Jour. A. M. A.) He is not only a great authority on his own branch of surgery, but also on dietetics. He has just published a remarkable book on "Diet in Relation to Health," in which his personal experience is a striking object-lesson. Thirty years ago, at the age of fifty-two, he gave up alcohol. For the sake of experiment five or six years back, he tried the effect of a claret glass of good wine at dinner every day for two months. Then the sick headaches and pains in the joints from which he had suffered in early life came back until he abstained again. Moreover, "after abandoning alcohol, the joints gradually lost their stiffness and ultimately became as supple and mobile as they were in youth, and continue absolutely so to this day." He adds that his is not a single example, "and really designates a very large class of active men possessing a more or less similar temperament." Half our bodily ills are due, he believes, to improper feeding. The necessity for diminishing the amount of nourishment taken as one grows older is not appreciated. "The extra glass of cordial, the superlatively strong extract of meat, are mistakes." Even the dentist shares in his condemnation. He gives the patient a set of masticators as efficacious as the originals, but he does not warn the patient that the body needs less food than in the heyday of life. Though not a vegetarian, Sir Henry maintains that three-fourths of our food should be vegetable. This ensures a lighter and more active brain. The light feeder, after his meal, has fresher wit and more cheerful temper. He does not snore in the armchair. Dyspepsia is unknown to him.

SCHOOL SANITATION. Expert opinion on school sanitation may be given as follows:

(a) School buildings should not be more than two stories high.

(b) All school rooms should contain certain air space equal to 250 cubic feet per pupil.

(c) All school rooms should contain floor space equal to 20 square feet for each pupil.

(d) The square feet of window surface should be at least one-fifth of the square feet of floor surface.

(e) No pupil should be seated farther away from the window than one-half times the distance from the top of the window to the floor .

(f) No school room should be heated by direct radiation.

(g) Air from the outside should always be used to furnish fresh air for the rooms.

(h) Quantities of fresh air moderately warm should be furnished, and in no case should fresh air be heated to high temperature, because it is thereby vitiated.

(i) Pupils should be furnished at least sythe, Dominion Med. Monthly. 30 cubic feet of air per minute.—D. For-

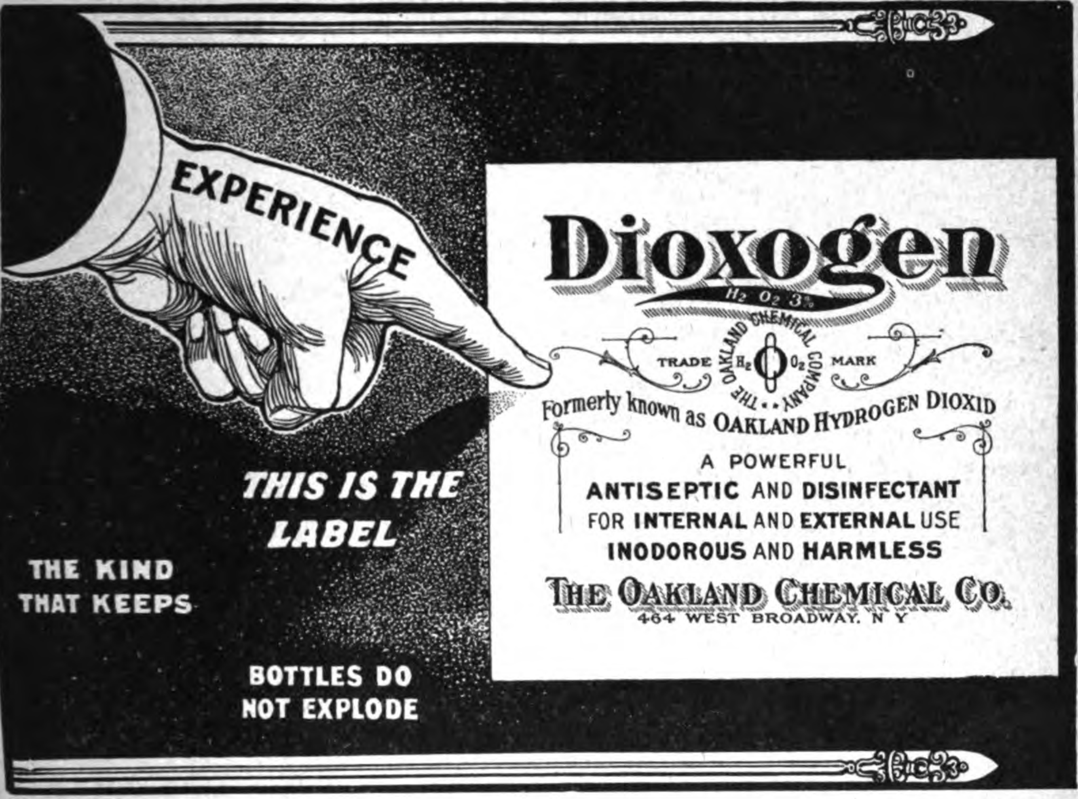
Book Notices.

PRACTICAL DIETETICS, with a Special Reference to Diet in Disease, by W. Gilman Thompson, M. D., Professor of Medicine in the Cornell University Medical College in New York City, etc. Second Edition, Enlarged and Thoroughly Revised. New York City: D. Appleton & Company. Price, cloth, $5.00.

It was nearly half a century ago that Bennett wrote: "Of all the means of cure at our disposal, attention to the quantity and quality of the ingesta is by far the most powerful." If this were true in its fullest application, there would seem to be an opening for one of the greatest schools of medicine, or, rather, all schools of medicine would take a back seat in the presence of a correct and universal knowledge of the proper dietetic system accurately put into use. But the trouble is that there is great ignorance as to the proper foods required, in both health and disease, and the object of this book by Dr. Thompson is to set forth with the latest light on the subject just what is required by the patient. He does it admirably.

A SYSTEM OF PHYSIOLOGIC THERAPEUTICS. A practical Exposition of the Methods Other than Drug-Giving, Useful in the Prevention of Disease and in the Treatment of the Sick. Edited by Solomon Solis-Cohen, A.M., M.D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic; Lecturer on Clinical Medicine at Jefferson Medical College; Physician to the Philadelphia Hospital, etc. Vol. IX—Hydrotherapy, Thermotherapy, Heliotherapy, and Phototherapy, by Dr. William Winternitz, of Univ. of Vienna; assisted by Dr. Alois Strasser, of Univ. of Vienna, and Dr. B. Buxbaum, of Institute of Vienna; and Balneology and Crounotherapy, by Dr. E. Heinrich Kisch, of the Univ. of Prague. Translated by Augustus A. Eshner, delphia: P. Blakiston's Son & Co. M. D., of Phila. Illustrated. Phila- Price for Complete Set of Eleven Octavo Volumes, $22.00.

The good work completed so far in this admirable series is continued in the present volume, which is much larger than the publishers contemplated at the beginning. The publishers announce that the issue of this book was delayed to permit the insertion of several supplemental chapters on important subjects and an appendix designed to bring the material and the illustration of new methods and new instruments right down to date. A large number of illustrations have been added, and the book as a whole is one that will be well received by the profession. The editor seems to be somewhat vague in his preface, but on glancing through the latter press everything said is quite explicit, and may be understood easily by the physician. One of the most important features is the list of mineral springs of the world, together with the application of the various waters to the treatment ot diseases.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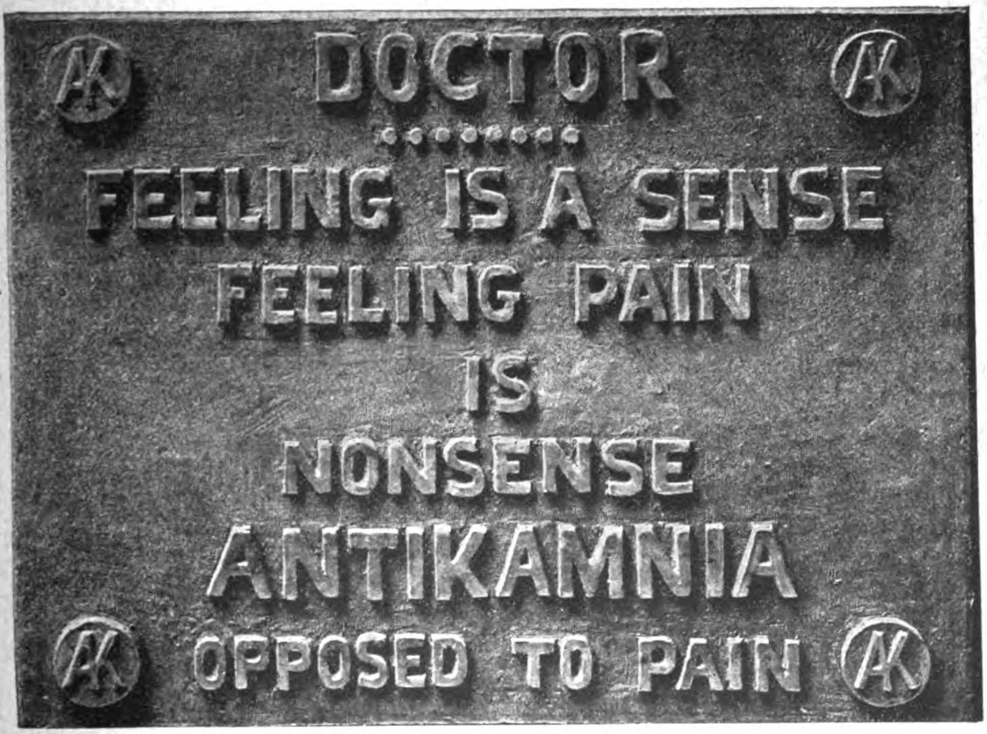
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A CONTRIBUTON TO THE THERAPEUTICS OF ANÆMIC CONDITIONS.

By Dr. Hermann Metall, Assistant Physician to the General Polyclinic, Vienna. (Translated from the German.)

In the medicinal treatment of the various forms of anæmia, whether it be essential chlorosis or the so-called secondary forms arising from severe loss of blood and various diseases (tuberculosis, cancer, etc.), iron has always occupied the most prominent place. In the management of chlorosis, especially, the chief object is the administration of an adequate quantity of iron, since upon this depends the success of all treatment. As to the manner in which iron acts in anæmic conditions, that is a secondary matter. Whatever be its mode of action, it remains an empirical remedy and yet one of incontestable value.

According to the unanimous opinion of many authors the effect of iron in chlorisis cannot be replaced by alimentation. Reinert, Klein, Immermann, Ensli, and others have shown that typical chlorosis cannot be cured in any other way, even by forced feeding. Some of them have made a series of very careful experiments for this purpose, and reached the remarkable result that during superalimentation, extending even over a number of weeks, the quantity of hæmoglobin in the blood increased scarcely a few per cent, and remained permanently at this level. That this is actually so we daily convince ourselves in cases of chlorosis in girls of the better classes. These girls, if placed on a full diet, accumulate more fat, while the chlorosis remains practically unaffected—it requires iron. The dietary therefore plays a subordinary part in the therapy of chlorosis (Klein), and is to be regarded only as an important adjunct to the treatment.

I will now devote a few words to manganese, which is employed in combination with iron in some ferruginous preparations for the treatment of anæmia. Hannon already directed attention to this metal, which is a constituent of healthy blood, and which besides iron has an important bearing on the absorption of oxygen by the blood. In fact, experiments have shown that anæmic conditions are most successfully treated with iron in connection with manganese. Chalybeate medication is materially aided and promoted by the addition of manganese. Efforts have therefore been made to introduce combinations of iron and manganese into therapeutics.

After laborious attempts, Dr. Gude, chemist, succeeded in producing such an iron-manganese preparation, which is easily absorbed by the entire intestinal tract, evokes no concomitant effects, and, as is illustrated in the following histories of cases, has proved an excellent remedy for the formation of blood. The preparation referred to is Pepto-Mangan (Gude). It contains iron and manganese in an organic combination with peptone, and is a clear fluid, resembling dark red wine, of an agreeable, non-metallic, non-astringent taste.

The advantage of this preparation is that it exerts a stimulating effect upon the blood-forming organs, these being excited to greater functional activity, and that the favorable effect manifests itself even within a short time by an increased oxygenation of the blood. At the same time, this chalybeate, as already mentioned, causes no digestive disturbances and does not injure the teeth.

In regard to the daily dose of iron, Quincke maintains that it should range from ¾ to 1½ grains of Fe. Most clinicians prescribe commonly 4 grains, which considerably exceeds the maximum dose recommended by Quincke. Some of them, like Niemayer and Trousseau, give even 7 grains of metallic

MEDICAL DIAL

A Monthly Record of Medicine and Surgery

Published by MEDICAL DIAL COMPANY

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Entered in the Post Office at Minneapolis, Minnesota, as Second Class Matter.

SUBSCRIPTION PRICE

United States, Canada and Mexico, per annum, in advance, ... $1.00
Foreign Countries in the Postal Union, per annum, in advance, ... 1.50

N. B. Matter for the reading pages should reach office of publication on the 20th of the preceding month and display advertising on the 25th, to insure attention.

Vol. IV MINNEAPOLIS, MINN., AUGUST, 1902 No. 8

A GOOD MOVE. The State Board of Health has taken hold of the subject of "Water Supply" for institutions and the cities, and we may cherish the hope, under such intelligent supervision, that something effectual may be done to render this indispensable fluid of consumption pure and suitable for general and domestic use. The indifference and cruel carelessness of individuals and communities in regard to the waters they drink, in this self-styled enlightened age, is beyond comprehension, except on the supposition of ignorance and utter stupidity. Many homes in the country have only shallow holes in the ground for wells, and near yards and barns for cattle, and thickly settled villages use wells polluted by surface drainage, and the still worse contamination of cesspools, and cities take their supply from lakes and rivers into which themselves and others conduct their sewers. These are well-known facts, and call for immediate and energetic action on the part of the Board, and it should be cordially assisted by all citizens in its efforts to improve the present deplorable condition of our water supply. It is estimated by competent authority that at least 100,000 deaths in this country are annually attributable to contaminated water, and of this number Minneapolis furnishes its full proportion of unnecessary and preventable deaths, to which must be added the cost and distress of much sickness that does not entirely destroy life.

The hospitals at St. Peter and Rochester have had artesian wells for many years supplying pure water, and the freedom from typhoid fever in these institutions is a well known fact. Such cases as have occurred in them could be traced outside for causes. All other state institutions if not thus supplied will now receive the attention of the Board.

As to what the State Board of Health is going to do, the following item in the Daily Journal, of recent date, will serve to explain:

"The State Board of Health will next year push to completion its scheme for a survey of the water supplies of the state, and in the meantime will require every city, village and public institution in the state putting in water or sewer systems, or extending present ones, to submit the plans of the same to the State Board, also state the source of supply and methods of water purification, before beginning work. The Board has heretofore only given advice on these matters when requested to, or when complaint was made of flagrant disregard of sanitary rules. The Board has already made a pretty thorough survey of the sources of water supply of the southern half of the state. Next year it will take up the work in the northern half."

MEDICAL PRACTICE IN THE PHILIPPINES. The condition of medical practice generally in the Philippines previous to the "invasion" of the United States forces may be learned from an article in the July number of the Atlantic by James A. Le Roy, concerning "Race Prejudice in the Philippines." He says, "Filth and unsanitary ways of living are urged against the Filipinos, while at the same time they are certainly not unclean by nature, as the daily bath and the scrupulously white clothes testify." Ignorance of hygienic laws of health prevails, and preventive medicine has not been taught in the islands as it is now in the schools of advanced medical thought, and as it will be by Americans, both by precept and example, wherever their authority is supreme. The friar-conducted college of Manila has practically turned out all the physicians in the past, and their knowledge of modern treatment of diseases and their causes may be inferred by a reference to their text-books in use, as they date back more than sixty years. Female cadavers are not dissected, and the course of anatomy, like most others, is a farce. Anæsthetics, antisepsis, the various serums, and the investigations of bacteria have all been introduced since the dates of their medical text-books, and have largely contributed to the foundation and advancement of medical science. A new order of things already exists in the sanitary arrangements. The Board of Health in Manila has given the statistics of Asiatic cholera for March; from the 20th to the 31st, there were 102 cases. Of these 94 were Filipinos, 6 Chinese, 1 American and 1 European. The Board took active measures to stamp out the disease at once; dwellings were inspected and disinfected, wells closed and distilled water distributed. The visitation of the disease is attributed to the ignorant opposition of the natives to any measures of sanitation; cases were concealed, the dead thrown into the Pasig river, or buried under brush-heaps and other rubbish. occurred with 215 deaths, an unusual Up to the 15th of April 275 cases had death rate even in this malignant disease; but of this number only five were Americans, a contrast sufficiently great to demonstrate the different conditions of living and nursing among the two classes of people. Bubonic plague, introduced it is thought, from Hong Kong, has almost disappeared, and the energetic work of the Board of Health will soon relieve the place of the epidemic of cholera as effectually as our health commissioners stamped out the yellow fever in Havana and the island of Cuba.

REGARDING CHRISTIAN SCIENCE. [The letter published below, and the sermon criticised, are both mostly concerned with side issues in medical journalism, but having given space to the sermon, it is only justice to allow this reply an equal privilege.—Ed.]

To the Editors of the Medical Dial:

There has recently come to my notice a copy of your paper containing a sermon of Rev. W. B. Riley of the First Baptist Church, Minneapolis, in which he attempted to explain to his congregation what Christian Science is and especially the meaning of its text book "Science and Health with Key to the Scriptures," by Mrs. Eddy.

At every point the further reading of the same book would have refuted the meaning he thrust into the various passages. In fact he pursued in his criticism the very unfair method of isolating a passage from the context and holding it up to ridicule; while no author can be properly understood by so detaching sentences; and the meaning of this book can be grasped only by taking the book as a whole. This very treatment has always been pursued by agnostics in dealing with the Bible and we are sure our critic would object to having it done with that book. Then why should he be so prone to fall into the same erroneous method with regard to "Science and Health?"

Again the critic would surely agree that a knowledge of the doctrines of the Baptist Church in their purity could not be obtained from a member of a denomination which is opposed and contending against the Baptist faith. For the one opposed could know the teaching of that church but imperfectly and could not even be impartial. So the Christian

Scientist would ask that he be allowed to explain his text-book for he has studied it and practiced its statements, so that he is assuredly the only competent one to duly estimate Christian Science.

Instead of a "conception of her mind" Mrs. Eddy does not claim "Science and Health" to be such, and the critic further on quotes her position which entirely refutes this opinion of his, in the following: "But as I was only a scribe echoing the harmonies of heaven in divine metaphysics."

The position that "Science and Health" holds in relation to the Bible is like a commentary—surely this minister uses one, the writer has heretofore in his study of the Bible adhered to his "Jamieson, Faussett and Brown," and from the number of commentaries that have been compiled, one must admit that there was a need of helps to the better understanding of the Scriptures. Every Sunday school teacher uses the notes which have been prepared on the lesson and all ministers explain to their congregation the Bible-texts. Surely our critic should accord to the Christian Scientists the same privilege of studying the Bible taking his text-book as his commentary, since "Science and Health," has brought to him the most satisfactory explanation of what is contained in the Bible.

When the critic isolates "Is God a Person?" from the context and says Mrs. Eddy denies the personality of God, he again is unfair. Had he read the whole of page 28 and "No and Yes" by Mrs. Eddy, from which he quotes in part, he would see the injustice he is doing to Christian Science. It says "Person is formed after the manner of mortal man." Surely he will agree with Mrs. Eddy that God is after the likeness of mortal man. Mrs. Eddy emphasizes in many places that "God is person" in the sense of infinite person and not in the corporeal sense. What does the critic mean by person, and why find fault with the Christian Scientist for not making God man like? God is infinite and the Christion Scientist is acknowledging God as no less that He is, Infinite Life, Truth, Love.

"God made everything that was made," as St. John says, "and without him was not anything made that was made." Who made sin and sickness? Did God? Are they a part of God's creation? God is good and has created everything, did He create a capacity in His creation so that sin, sickness and death could be evolved?

On the basis that God is supremely good and all powerful, Christian Scientists are gradually gaining a supremacy over sin, sickness and Satan. This dominion is rightfully man's since it was originally given him as recorded in Genesis. Instead of these errors controlling man, and taking possession of him, and destroying him, man should control them. This control is not by enduring but by overcoming all powers that are opposed to God, and the most natural way of accomplishing this end is taught by Christian Science. Christian Scientists agree most emphatically with our critics that the healing is a compassionate act of an all-powerful God, they differ from him as to the method in which an all-loving, all-powerful, all-knowing, heavenly Father accomplishes this compassionate act of healing the sick and reforming the sinner.

The key note of Christian Science is the distinction given between the real and the unreal, or as Paul put it, the unseen and the seen, the eternal and the temporal, the spiritual and the material. Until one grasps this distinction he is unfitted to criticise Christian Science, or to explain it. The critic acknowledged his unfitness to do this, as he says some statements are "abstruse." And again he calls the teachings of Christian Science "misty." They are not so to the Christian Scientist and the natural and honest method would have been, when he found them "abstruse" or "misty," to have submitted his sermon to a Christian Scientist and so to have learned whether his points touched the teachings of Christion Science.

Christian Science acknowledges that sin and sickness are phases of human experience, but their non-existence as eternal entities is perfectly logical and demonstrable in the light of man's real spiritual nature as God's likeness. Our critics do not apprehend this last point that the statements of Christian Science are demonstrable in the same way as Euclid lays down his theory, draws on the definitions to uphold his structure, finally deduces the conclusion and adds his Q. E. D.

The critic has given Christian Scientists credit for peace, sweetness, humility, patience, abounding love. Do worldly teachings bring these virtues? Still he says our basis is unbiblical. The Bible says "Pray without ceasing." Science and Health Rev. Ed. page 495, says "When the illusion of sickness or sin tempts you, cling steadfastly to God. Allow nothing but His likeness to abide in your thought." Is it not scriptural to go to God, and depend entirely on Him for help in trouble rather than depend upon a drug? To pray to God rather than look to human wisdom for deliverance? Is not following what the Scriptures teach, basing our doctrines on scriptural authority? Or as Mrs. Eddy says in Science and Health, page 1: "The prayer that reclaims the sinner and heals the sick, is an absolute faith that all things are possible to God—a spiritual understanding of Him, an unselfed love." The Christian Scientist is assuredly biblical, for nothing he says or does is based on other authority than the Holy Bible.

The critic bursts forth with the statement that Christian Science has honored the doctrine of Divine Healing. As there is nothing Divine except what relates to God, therefore Christian Science in honoring Divine Healing has honored God. Why this contention then? No church has honored God as Christian Science has, for it teaches "Pray without ceasing," and pray to God, depending on no other help, no drug, no matter. And why does the critic when he is so convinced that the Scriptures teach Divine Healing, spend so much force trying to weaken the public's confidence in a body of Christians who have taken the Scriptures as their basis, and are endeavoring to give this doctrine of Christian Healing to the world? He surely should uphold Christian Science for being faithful, when he says the orthodox churches have not "stood for what the Scriptures say on the subject of healing." Is not the public already awakening to the animus of the churches in preaching so many sermons against Christian Science?

A Presbyterian minister at Lansing, Mich., in introducing a Christian Science lecturer, said in part, "As concerning this sect we know that everywhere it is spoken against, such was the reception accorded to Paul, such is accorded a Christian Science lecturer today. I feel my unfitness to stand here tonight for at least two reasons: First—I myself along with a million others have been rolling it around under my tongue as a kind of sweet morsel that this movement was neither Christian nor Scientific. Second—the denomination I represent has in its highest judicatory refused to recognize this faith, as in any sense a church of Jesus Christ. 'Taste and see that the Lord is good,' is a favorite text of mine. There is nothing like experience to justify the ways of God to man."

As to the atonement Christian Science does not deny the efficacy of Jesus' great sacrifice for mankind by yielding up his life on the cross. In no other way could the atonement be made. Mrs. Eddy says in "No and Yes" 44—This blood of Jesus is every thing to human hope and faith.

The critic has been honest in saying "Mrs. Eddy emphasizes the idea 'God is Love' in all her works," he speaks of the frequency of this phrase and adds, "Somehow or other, I feel drawn to the individual who emphasizes that fact, to the denomination that gives it prominence."

Regarding sin Christian Science fully agrees with the Bible, follows it strictly, adheres to it, and Mrs. Eddy tells how to overcome sin—not by saying there is no sin, or one cannot be a sinner, but (Science and Health 461) "To prove scientifically the unreality of sin, you must first see the claim of sin and then destroy it."

Then the reference to Mrs. Eddy "marrying" and "getting the best of the bargain" needs no answering. Christian Scientists never make personal attack on people or on their religious opinions. A Christian Scientist would depart from the spirit of Christian Science if he stopped to attack the Baptist religion or any other religious denomination. Christian charity demands that all people act Christianly.

Respectfully,
JOHN E. PLAYTER.
Minneapolis, Minn., June 26th, 1902.

Medical Articles.

PSYCHIC INFECTION. A paper read by Dr. Dwight S. Moore, of Jamestown, N. D., at the meeting of the North Dakota Medical Society, May 27, 1902:

In an experience of about fourteen years, devoted to the care and treatment of the insane, I have been able to study about three hundred cases of insanity arising from "moral causes" and exhibiting no marked stigmata of degeneration, and as far as the history could be ascertained, having no hereditary taint. Out of this number there is but one case which could be properly classified etiologically as one of psychic infection. The circumstances attending the development and further history of this case are such as to make it an interesting one from the standpoint of those interested in psychological problems.

In order to properly study this case it is first necessary to describe the case, from which the disease was apparently communicated.

Mrs. N. E. S., aged 38, female, married, confined seven times, three children living, youngest two and a half years of age, was born in Pennsylvania. The family history in preceding generations is not at all clear, but the tendency towards forms of nervous disease evinced itself in her immediate family group in a marked manner.

One brother has epileptic attacks, which have not prevented him heretofore from making a fairly successful man at his occupation as a rancher. One sister was imbecile. The patient herself was always "peculiar," although a well liked and highly respected girl in the days preceding her marriage, when she lived in a small city. This peculiarity had for its principal manifestation the development of very strict views on the subject of religious observances. Her conduct was always of the most scrupulous exactness. Her occupation was that of a housekeeper, first for her father's family, and then for her husband and children. She was small, slender, though "wiry," alert, nervous and apprehensive. Some years before the occurrence of the outbreak which led to her commitment to the North Dakota State Hospital she began to have hallucinations both visual and aural which were followed by delusions; for example, she came to believe in the reality of the apparition of a dead child, which watched over the sheep on the lonely prairie, and protected them from straying and other harms. Such ideas as these while she often gave expression to them did not seem to interfere with the proper performance of her tasks as a housewife, or her general conduct towards her family and neighbors.

For two or three years there was a gradual development of the influence which these hallucinations, and the delusions based upon them, had gained over the mind of the ufortunate woman. This culminated in an outbreak during which she refused to give food to her children; imagined that they and her husband were possessed by devils; that spiritual influences, visible and invisible, and principally of satanic origin, surrounded her, and when finally summoned before the Commissioners of Insanity, made the most furious resistance to the officers. She was assisted in this resistance by her husband, who had now become fully dominated by her ideas and shared in all her delusions and in many of her hallucinations.

On admission to the Hospital the nutrition of the body was found to be poor, the tongue coated, the facial expression anxious, and attitudes and gestures of a defiant and violent character. Her conversation was coherent, but irrational, rambling and almost incessant. Her temperature was normal, but the pulse was 100, and respiration 20. There were bruises on her limbs from the violent struggles she had made during the period of excitement. Her skin was in a neglected condition, there was poor circulation, and on examination of the heart, a presystolic murmur was heard at the apex. She thought she saw and heard devils, with occasionally a visitant from some brighter clime. She took the persons surrounding her for devils, and was inclined to constant resistance. She took very little food, believing that it was poisoned. She improved physically under treatment from the time at which she was admitted (April 14th,

1898) for a few months, but her mental condition never became any better, though after a few weeks she became much more manageable. She cherished an intense aversion to her husband from the time of her admission till the moment of her death, believing that he had deserted her in her hour of need and had not made a sufficiently strenuous resistance to the officers of the law at the time when both were taken before the Commission. During the latter part of 1901 she grew thinner, became less active, developed oedema of the lower extremities and an obstinate cough. Growing weakness and emaciation from a slowly progressing tuberculous affection of the lungs finally forced her reluctantly to take to her bed, early in May, 1902. The progress of the disease was very rapid from this time on, and on the 19th of May she died.

The autopsy revealed an adhesion between lungs and pleura on both sides. Both lungs were filled with tubercular nodules, the left apex being almost solid. The right apex had broken down into a mass of semi-solid purulent substance. The heart weighed 8½ ounces. The mitral valve was thickened and cartilaginous, but fairly competent. The aortic valves were covered with vegetations. The liver was greatly enlarged, pale and hard, and weighed 56 ounces. There was the usual mesenteric involvment in the tubercular process. The stomach was dilated; measured eighteen inches in the greater curvature, and was crowded out of place by the enlarged liver till the pyloric end was only about 2½ inches above the symphysis pubis. No macroscopic changes were observable in the brain or cord on their membranes, with the exception of the appearance of chronic inflammation of a portion of the dura and the presence of serous fluid between the pia and the arachnoid.

The husband of this woman was born in Scotland, although living in this country a great part of his life. His father, a Highlander, lived to an advanced age possessing unusual vigor of mind and body up to the last. Not the slightest history of any nervous or mental affection exists in the family traditions, and all, as far as known, were vigorous and healthy, both physically and mentally. The patient himself was of a jolly and sociable disposition when a young man. After marriage he came to share in and sympathize with the extreme opinions of his wife as to religious observances, and abandoned nearly all the forms of recreation and amusement common in the rather isolated settlement in which they made their home. At the time of the development of his wife's belief in the reality of the hallucinations of her deceased daughter acting as a shepherdess for their wandering flocks on the prairie, he expressed an opinion that her belief in this subject might be true. There was a slowly progressing tendency on his part to avoid society and amusement. He led an isolated life, and allowed his mind to dwell more and more upon his wife's peculiar opinions. About a year before the outbreak which led to his commitment he came to dwell almost entirely in his conversation upon religious subjects when he spoke with any degree of freedom. His ideas verged more and more towards the fanatical and the gloomy; and at last when his wife was attacked with that acute paroxysm described above, he cared for her tenderly without calling in any outside help or informing anyone else of her condition. At last worn out with constant watching and struggling with insufficient food, and no companion save his raving wife and frightened, half-starved children, his own self control gave way entirely and he adopted all her insane ideas as described above. He made a furious resistance to the sheriff and his assistants, who came to convey them before the Commissioners of Insanity, and when brought to the Hospital was confused and defiant in his conversation, preserved a sullen attitude towards doctors and nurses, refused food, and thought he was surrounded by devils. He was emaciated and his tongue was brown and dry. His temperature was 98 8-10 F.; pulse 90. His skin was dry and harsh, and the circulation very sluggish in the extremities. He had an acute bronchitis of mild character, and was hoarse probably from over exertion of the voice. He was severely constipated. Lavage of the colon afforded considerable relief to the patient at once. Chloral hydrat. grs. xxx given at bed time with a little whiskey and milk secured a good rest. Next day he was very sullen, had to be urged strongly to pursuade him to take sufficient nourishment. Gradually, however, in three or four days, he began to take more nourishment. His suspicious attitude disappeared. He began to notice those around him, and to like to go out and take exercise. By May 1st he had made constant improvement and at that time was out every day on parole. He became melancholy when he thought much or talked about the circumstances of the attack of mental aberration which had come upon him and his wife; but these states of mind were but transitory. Physical improvement became very marked. On the 14th of the same month, having continued entirely free from any delusion since May 1st, and having regained to a great extent his former physical health and vigor, he was discharged from the institution and returned to his farm. Since that time he has remained well physically and mentally, has been industrious and successful in his work, and regained much of his old time jollity of disposition. He paid as many visits to his wife as those in charge of her thought best, these visits seeming in nearly all cases to be unpleasant to her, and productive of excitement on her part after he had gone away. There is at present no indication of any recurrence of the mental affection on his part.

It is popularly believed that those engaged in caring for the insane or continually in intimate association with them are especially liable to mental disease. The history of a case of "Folie a deux" shows, however, that this belief is usually true only when the neurotic taint is present in the individual receiving the contagion, so-called.

Contagion of example and the influence of association make a lasting impression as a usual thing on the mind of another person only when there is a predisposition to mental disease on the part of that person.

For this reason cases of "Folie a deux" are generally observed in relatives who have been closely associated and thus exposed to the influence of the same environment.

In the above case, however, the element of hereditary predisposition seems entirely wanting, and the influence of example and continued association seem to be the predominant etiological factors.

The case is also an example of the principle of prognosis, that communicated insanity is almost without exception susceptible of cure by removal from close association with the case from which it has been communicated, and the original environment which may greatly aid in maintaining the delusions after they have been formed. Other cases show that where there is an hereditary taint in the recipient the prognosis is not so favorable. If both cases seem to share equally in the genesis of delusion sometimes one person originating the false belief and sometimes the other doing so, the chances for recovery on the part of either individual are not good. It is probable that the temporary exhaustion on the part of the recipient of the delusions in the above case tended to produce a condition of the nervous system which rendered it impossible for him to resist longer a belief in the delusions which had been exercising their subtle influence upon him through the conduct and conversation of his wife.

Children and young persons especially predisposed by heredity to nervous and mental disease should not be allowed to be in constant intimate association with the insane, and this principle should be borne in mind when giving an opinion as to the safety or advisability of treating a case of mild chronic mental aberration at home instead of having it transferred to the care of a hospital.

HEBEPHRENIC INSANITY. By William B. Fletcher, M. D., Indianapolis.

Hebephrenic insanity may assume all the forms of mental derangement of the adult, and requires no special classification; thus, we speak of hebephrenic melancholia, hebephrenic mania, hebephrenic paranoia, etc.

Excluding those mental changes of pathological character that may arise from injury to the brain or constitutional diseases at any period of infancy, we find that puberty is the time of the development of the insanities of childhood. It is near this time, from the tenth to the twenthieth year, that, not only the sexual organs but the brain is undergoing most rapid changes; the arteries become larger in calibre; the whole body, and the brain in particular, becomes larger, broader and deeper—millions of new cells being added, great quantities of new blood are demanded. This transition is always manifest in changes in the figure as well as the mind. At its completion the contour and character of the individual is established.

The period of puberty is usually stated by medical writers as from twelve to twenty years of age, but my observation and information collected from reliable persons of either sex who gave me their personal experience, that in many precocious children the first dawn of puberty is from eight to ten regardless of sex, and that in cities the period of sexual development commences earlier than in the farm and village districts. I have not observed any distinction as to race, but social position seems to determine the period of sexual growth. Children of the wealthy or indulgent parents who have no occupation except their school exercises, and have many hours each day for amusing themselves by overheating their imaginations from story books, fairy tales, children's magazines, newspapers and very "yellow" journals, develop sexual proclivities prematurely as compared with the boys and girls who have to aid their parents in some systematic manual labor.

The form in which hebephrenia most frequently develops in girls is that of melancholia and is largely due to the exhaustion of the physical and over stimulation of the mental faculties. As I write this, I read from a morning paper (June sixth) of a girl, aged sixteen, who became melancholy a few days ago, and last night committed suicide with carbolic acid. Who knows how long she had a secret grief of unrequited affection which she had fabricated from an over stimulated imagination? Last week it was a school boy, a good student at school, who in melancholy mood deserts his school and parents and wanders many miles away to his former childhood home, and finally returns, having the delusion that he has been kidnapped.

Many subjects of hebephrenia, particularly girls, having devoted their youthful minds to much romance, become sullen and irritable from what they believe the "cruelty of parents" and imagine themselves "adopted" by those whom she calls father and mother, hence many such girls wander from home. I am reminded of two or three such cases that have occurred within a few years, one where a girl, aged twelve years, went away from this city on an unknown road and slept two nights in straw stacks; when found by farmers she related that she was of doubtful origin and had been in consequence driven from home by her foster parents, whereas she had the most loving of parents and elegant of homes.

Among boys the rapid and frequently premature advance of puberty plunges them into a life of mental dissipation wherein they become violent of temper, restless of all restraint, boisterous, given to immense exaggerations, and with a decided tendency to seek the company of low and wicked companions. Many children at this period are guilty of theft and wanton cruelty to animals.

Children who are brought up with over intelligent and insufficient bodily exercise, who live on "soft" foods, predigested cereal, and other foods which are only good for the incomes of the owners of newspapers, become anemic just at the time of life when they require a good volume of blood of the best quality. I remember that Oliver Wendell Holmes cites a case where a girl of ten became suddenly an egregious liar as well as a kleptomaniac which was cured, not by punishment, but by being taken from the city schools in Boston to an outdoor life on a New Hampshire farm and given tinct. ferri acetatis in ten-drop doses every four hours, which restored the child to her former truthful tongue and a due respect for the property and rights of others.

There is no doubt but many a boy and girl is today an inmate of our juvenile reformatories who were adjudged criminals on account of their environment and lack of sufficient blood-making food. Where parents are unable to properly care for them, the manual labor and systematic living in our industrial institutions upon a diet of bacon, beans, bread, hominy and hoe-cake is the best to bring about reformation.—M. and S. Monitor.

HAY FEVER. By Geo. J. Monroe, M. D., Louisville, Ky.

It will not be long before the annual attack of hay fever will have in its grasp many thousands of people. It is the bane of many, and they just as much expect it as they expect the fifteenth of August. I am, to some extent, a sufferer myself, and have often wondered why some German, or some smart Yankee, has not discovered a specific for it. Evidently there are certain causes producing it, and why has not someone been able to strike upon the cause? When the absolute cause is ascertained, it carries with it, undoubtedly, the cure. I have noticed my own case somewhat closely. The first symptom I have of it is a frequent desire to urinate. The quantity of the urine, however, is diminished. The urine is red and has a rank ammonia odor. The specific gravity of the urine is about 1025. Naturally my urine is 1010 to 1015. I find it acid, coloring the blue litmus. I also find more or less uric acid in it. I have some slight tinges of muscular rheumatism. This seems to be mostly in the muscles of my back and shoulders. The next perceptible symptom is a gaseous formation in my stomach and small intestines, and more particularly in the ascending and transverse colon. The constipation is represented by lumpy feces, and these are expelled by a good deal of force. This symptom is accompanied by the expulsion of a large amount of gas. It seems to me that between the lumpy feces there is gas, as though it had been compressed and retained by the fecal matter. There is slight sickness of the stomach. Not enough to cause vomiting, but enough to cause a disgust for food. There seems to be a desire for acids. When I have hay fever I want vinegar mixed with everything I eat. After this condition has continued for a day or two the mucous membrane of my nose and throat becomes dry. The mucous secretion seems to be deficient. I feel like rubbing my nose. Not very long after this I begin to sneeze and the mucous begins to flow very freely. I require a half dozen handkerchiefs to tide me over the day. About twenty-four hours after I begin to sneeze, my eyes begin to burn, itch and water. They soon are congested, red and inflamed. In twenty-four hours I cannot read or write. I have a slight rise intemperature, and some increase in the circulation. My face feels swollen and hot, although there is really very little rise of temperature. My nervous system seems to participate with the trouble, and I am cross and irritable. Everything appears dark and dismal. I dislike to talk, and I cannot think. I am unfit for business. Everything seems to conspire against me. Nothing apparently goes well. I am cranky with my patients and disagreeable at home. I have tried to give my symptoms when I have hay fever. I seldom have more than a week of it, and if I had more I believe I would be strongly tempted to put an end to my existence. I certainly sympathize with those who suffer for a couple of months. I ask this question: Is there any connection between hay fever and appendicitis? I have, in the last few years, become acquainted with ten or twelve cases of chronic hay fever who have developed appendicitis.

I will mention two cases. My brother has been a sufferer from hay fever for twenty-five years. Two years ago he was buying some things in Chicago, preparatory to going to Petoskey, Mich., when he was attacked with appendicitis in the streets and had to be operated on. Mr. J. J. Douglass, of this city, is a sufferer from chronic hay fever. He had an attack of appendicitis about a year ago, and had to submit to an operation. I know of several other hay fever patients who have had to be operated on for appendicitis. I might say, in my own case, that if the wind happened to come from the east or southeast during an attack I had to shut myself in the house until it changed. There is, in these chronic cases, after the third or fourth week, a severe attack of asthma. Many hay fever patients have to sit up all night on account of the difficulty in breathing, which the asthma produces.

At twelve p. m., one night last fall I was called to see a hay fever patient, suffering with asthma. I found my patient almost pulseless; skin blue, surface cold, respirations but six per minute, gasping for breath and appearing as though he must soon die. I injected into one arm 1-4 grain of sulphate of morphine, and 1-150 grain of atropine. I also injected into the other arm 1-100 grain of nitro-glycerin. Relief was almost immediate. In twenty minutes he was sound asleep, and breathing quite naturally. He slept four hours. When he awoke I repeated the injections, as there was still some trouble in breathing. In six hours he awoke again and felt quite comfortable. He seemed to improve from this time on. I gave him 1-60 grain of strychnine and 2 grains of capsicum every four hours. From day to day he got better. After about a week of strychnine I gave him Fellow's syrup of the hypophosphites, stopping the strychnine. Every night, at bedtime, I gave him a grain of calomel and 1-4 grain of ipecac. I also gave him as nourishing a diet as he could take. I found the best food for him was beef and vegetables. Evidently sugars and starches are not good food for a hay fever patient. The best drink I could give him was abundance of water and lemonade; stimulants, tea and coffee are bad for hay fever patients.

I find in my own case that some seasons I am much worse than others. If there has been a large growth of vegetable matter, especially if it comes on dry during the first part of August; my hay fever is worse. The way I treat myself is as follows: When I begin to notice that peculiar condition of my stomach, and the muscles of my back begin to feel stiff, and I have a desire to urinate often, with some constipation, I take about 10 grains of calomel in grain doses, an hour or two apart, followed up with Hunyadi Janos water. I follow this up with 5 grains of sulphate of quinine, and 1-60 grain of sulphate of strychnine, three times a day for about three or four days. Usually by that time I am all right. I have to repeat this every seven or eight days, until the weather becomes cool. I am inclined to think that if we would, say a month or six weeks before the expected attack of hay fever, make some preparatory treatment, we might escape it. I shall do so this summer. Four weeks before the fifteenth of August I will begin by taking the 10 grains of calomel as above, repeating every seven or eight days. I will take 15 grains of sulphate of quinine once a week. I will take continuously 1-60 grain of sulphate of strychnine twice a day, commencing a month before the expected attack. I shall avoid all stimulants, even tea and coffee. I will eat but very little sugar. I will take a cold bath three or four times a week, and a good deal of exercise outdoors.

I expect by this treatment to escape hay fever entirely this fall. I may not do it, but I shall be none the worse from trying.—Med. Summary.

POLYHYDRAMIOS: ITS DIFFERENTIAL DIAGNOSIS AND TREATMENT, with the Report of Cases. By Edward P. Davis, A. M., M. D., Professor of Obstetrics in Jefferson College, Philadelphia.

Case I. A multipara, much depressed in general health, with rapidly increasing distension of the abdomen, the cervix tightly closed, dilated by an elastic bag, the membranes ruptured artificially and compression made by a broad bandage held across the abdomen by assistants. Eleven quarts of amniotic fluid escaped. The fœtus presented in a transverse position and was delivered by podalic version. The placenta was removed, the uterus douched with antiseptic solution and tamponed. Abdominal compression was continued, the mother making a good recovery. The fœtus had but little tissue in cord and brain. Both were rudimentary in character. It was otherwise well developed and stillborn.

Case II. A multipara, sent for removal of cystic tumor, supposed to be ovarian. During previous pregnancies had been well; during present pregnancy had much nausea and rapidly increasing distention of the abdomen beginning at the fifth month. Urine practically normal; blood showed slight anæmia. On examination, abdomen greatly distended, no fœtal parts nor heart sounds could be found. Finger passed through the cervix detected small fœtal head floating in fluid. Diagnosis of polyhydramnois was made, membranes were ruptured and about two gallons of fluid were allowed to escape. Labor followed with twins, one of which had normal chorion and amnion with sac unbroken, the other had polyhydramnios. The placenta was large and edematous, the veins of the cord of one twin greatly enlarged and tortuous and the tissue of the placenta and cord was granular with areas of cystic degeneration. The mother recovered well.

Case III. Primipara, previously well. During early pregnancy excessively frightened by lightning. Was at the end of the ninth month. Came into tedious labor with excessive amniotic liquid. Male child weighing five and a half pounds delivered by forceps. It breathed feebly and lived ten minutes. Posterior portion of vertebral column and lower cervical and upper dorsal region deficient in development, meningocele present. Placenta thicker and larger than normal, quantity of amniotic liquid not much in excess, the cord very long and spiral. The mother made a good recovery.

Case IV. Primipara, white, aged 18. Mother died in confinement and cause not stated. Pelvis narrowed at the lower portion, expanded at the brim symmetrically; the urine normal, the patient fairly well nourished and suffered little during pregnancy. Complained of pain in the right upper portion of the abdomen, dyspnœa and sleeplessness. On examination, abdominal distention marked, fœtus could not be outlined nor could fœtal heart sounds be distinctly heard; the patient's lower limbs were considerably swollen, her heart action labored. The patient complained of indefinite pains for several days when the os was found fully dilated. The patient was given tincture of nux vomica, the membranes were ruptured and compression applied to the abdomen. When the mebranes ruptured, the head immediately engaged, the 'child descended and was allowed to emerge from the body of the mother gradually.

The placenta was removed, the uterus douched and packed with gauze. The mother made an uninterrupted recovery. The fœtus gasped but did not breathe: its heart beat persisted for three-quarters of an hour in spite of respiratory failure. Upon autopsy, general dropsy was found and in the abdomen and pericardium a large quantity of fluid. The lungs were edematous, the kidneys showed atrophy of the pyramids and the liver was softened and enlarged. The cord was shorter than the average, the placenta boggy, light in color, large and friable. The decidua was much roughened, resembling a fibrinous exudate.

Case V. Multipara, with moderate quantity of fluid. Dilatation well advanced, but pains inefficient because of over distention of the uterus. Made patient sit upon a bucket, punctured membranes and allowed several quarts of fluid to escape. Gave quinine and ergot. The child was speedily delivered; it failed to nourish properly and died in ten days with symptoms of intestinal obstruction.

By polyhydramnios is meant more than two pints of amniotic liquid at full term. As much as seven gallons has been seen in the human species. Pathology of the condition not fully known. Many conditions accompany polyhydramnios. The placenta often large, dropsical and infiltrated, Jungbuth's vessels often enlarged, amnion and chorion may be thickened with extensive fissures in the epithelial layer of the amnion and fatty degeneration of cells. By experiment, seven times more fluid passes through veins than through arteries of cord into the placenta. Any fœtal condition causing venous engorgement tends to produce polyhydramnios. Irritating substances formed in lymphatics may cause this condition. It does not result from increased renal action in the fœtal kidneys. Excessive secretion from the cerebro-spinal canal of the fœtus may contribute to polyhydramnios. Polyhydramnios is normal at the fourth month and its persistence results from failure in normal development. By cryoscopy further information regarding the osmotic properties of maternal and fœtal blood and of the liquor amnii may increase our knowledge. Bacteriology gives no information upon the subject.

The diagnosis is made by first diagnosticating pregnancy, then by observing that in polyhydramnios we can usually obtain evidence of faint uterine contraction and can often insert the finger through the cervix and detect a presenting part. Ectopic gestation must be kept in mind as polyhydramnios may complicate ectopic pregnancy. In ovarian cyst the illness is longer, the swelling at first unilateral. The intermittent hardening of the tumor is absent and the uterus can be found but little enlarged. In ascites the dullness changes when the position of the patient is altered.

When pregnancy is found, a second diagnosis must be made to recognize or eliminate the presence of pregnancy and ovarian cyst, pregnancy and ascites, plural pregnancy, an hydatid mole, a very large child or a malformed fœtus. In hydatid mole, the pear-shaped uterus has little fluctuation and there is repeated discharge of blood. In large or malformed fœtus the hea rtcan usually be heard and palpation reveals the child. While twin pregnancy can generally be recognized it may be completely mistaken for polyhydramnios. In exceptional cases, ovarian cyst complicating pregnancy may be difficult to diagnosticate and exploratory incision may be necessary.

Attention is called to misleading phenomena, the absence of such tension upon the membranes as would be expected from the quantity of amniotic liquid and also the absence of early shortening of the cervix.

Treatment without drugs is without value. When Polyhydramnios is slight and not increasing, the patient's health remaining good, pregnancy should not be interrupted. When distenton increases rapidly and the patient's health is impaired, under thorough antiseptic precautions the cervix should be dilated sufficiently to admit the finger. A pair of uterine dressing forceps closed should be inserted and the membranes ruptured, the forcepts opened and a rent sufficiently large made to permit the introduction of the finger. Fluid should be allowed to escape very gradually until the presenting part descends firmly against the cervix. Firm pressure must be made over the abdomen by a many-tailed abdominal binder or broad bandage held by assistants. The patient must be watched as labor is often precipitate and the fœtus may assume unfavorable positions. Labor should not be hurried in the interests of the child, because the fœtus is often deformed.

Polyhydramnios is dangerous to the mother from over distention relaxation, hæmorrhage and increased danger of sepsis. The uterus must be completely emptied and made to contract. A hot intra-uterine douche of 1 per cent lysol, tamponing with iodoform gauze, the hypodermatic use of strychnia and ergot and other stimulation are necessary.

Occasionally after abdominal section, the excess of amniotic liquid has disappeared by absorption.

The next meeting of the American Medical Association will be held in New Orleans, May 5 to 8, 1903.

Dr. Simmons, the talented editor of the Journal of the American Medical Association. underwent an operation for gallstone disease, July 13.

Cuba has accepted the invitation of the United States government to participate in the Louisiana Purchase Exposition.

President Roosevelt has issued a proclamation officially announcing the postponement of the World's Fair to 1904.

Virginia is considering an appropriation of $50,000 for state representation at the World's Fair. That state, the home of Thomas Jefferson, who bought the Lousiana Territory, has more than ordinary interest in the coming exposition.

A handsome equipment of the model post-office in the Bazaar building at the Pan American Exposition has been ordered sent to St. Louis to do duty in the World's Fair post-office in the Administration building.

The Island of Maui will be represented in the Hawaiian World's Fair Commission by A. N. Kepoikai, an attorney; D. D. Baldwin, the largest pineapple grower of the island and R. C. Searle, a large coffee and live stock grower. Mr. Baldwin is also on education and on the land shells and ferns of Hawaii.

It is announced that Francis J. Norton, of Savannah, Ga., has been commissioned to design the Chinese building for the World's Fair at St. Louis. Mr. Norton was architect of the Chinese building at the Columbian Exposition at Chicago.

The reproduction of the Robert Burns Cottage, together with Stirling Castle, which has been planned for the World's Fair, will cost about $25,000. The Burns cottage would be too small for an exhibit of the poet's manuscripts and other relics, and these will therefore be displayed in the replica of the castle.

Medical Miscellany.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION will hold its annual meeting at the Hotel Kaaterskill, Catskill Mountains, New York, on the 2d, 3d and 4th of September, 1902. There will be scientific papers, discussion, local excursions, concerts, balls, banquet, special parlor entertainments. Reduced rates to members, their families and friends.

ROCKY MOUNTAIN INTER-STATE MEDICAL ASSOCIATION.—This Association, whose membership includes the physicians of Colorado, Wyoming, Utah, Idaho, Montana, Arizona and New Mexico, will hold its annual meeting at Cheyenne, Wyo., September 9 and 10. The officers of the society are as follows: President, Dr. R. Harvey Reed, Rock Springs, Wyo.; vice-presidents, Drs. Donald Campbell, Butte, Mont., and Walter R. Pike, Provo, Utah; treasurer, Dr. Elias S. Wright, Salt Lake City, Utah; recording secretary, Dr. George P. Johnston, Cheyenne, Wyo., and corresponding secretary, Dr. Samuel D. Hopkins, Denver, Colo.

AMERICAN ASSOCIATION OF ORIFICIAL SURGEONS. The fifteenth annual meeting of the American Association of Orificial Surgeons will be held in Chicago, September 10th and 11th, 1902. A program is being made up of lectures and papers by the leading specialists and practitioners in rectal, genito-urinary and gynecological work, and in the treatment of all chronic diseases. The orificial surgeons are the workers in the great field of the reflexes, and the profession generally is every day being brought closer to a realization of the fact that the reflexes play a most important part in the chronic manifestations of disease. Papers and discussions will cover the entire scope of the work, preparatory, operative and therapeutic, and the sessions will be of great benefit to all who attend. H. C. Aldrich, M. D., of Minneapolis, Minn., president; Ralph St. J. Perry, M. D., secretary, Farmington, Minn.

TWO DENVER COLLEGES UNITE. The Denver College of Medicine and the Gross Medical College have united. The school will be known as The Denver and Gross College of Medicine, Medical Department of the University of Denver. The college will be located in the commodious Haish building, corner Fourteenth and Arapahoe streets, Denver, Colo., heretofore the home of the Denver College of Medicine. The teaching force will embrace the faculty and instructors of each school under the management of a board of trustees selected from each of the schools as follows: Dr. E. C. Rivers, president of the board; Drs. Thomas H. Hawkins, E. J. A. Rogers, S. G. Bonney, C. K. Fleming, W. A. Jayne, Robert Levy, Leonard Freeman and Henry Sewall.

THE RUSH HOSPITAL for Consumption and Allied Diseases, of Philadelphia, has recently purchased a farm at Malvern, about 21 miles from the city and 660 feet above tide water, where it opened, in June, a country branch for the treatment of patients in the earlier stages of consumption. The buildings are healthfully situated and are admirably adapted for the purpose in view, having been erected for a sanitarium. Each patient will have a separate room, and all, so far as possible, will be given such light employment as may be advised by the physicians in charge.

WASHINGTON'S NEW MUNICIPAL HOSPITAL. About the year 1897 Congress appointed a committee to investigate the charitable and reformatory institutions in the District of Columbia. This committee went very thoroughly into the subject and in its official report recommended that a new municipal hospital should be built. Acting under the direction of Congress, Commissioners of the District of Columbia then purchased an admirably adapted tract of 32 acres of land, situated 2¼ miles to the north of the White House, immediately on the border of the present built-up area and lying on the projection of Thirteenth street and of Kansas avenue.

A program of competition was prepared which made provision for a general hospital and a hospital for pulmonary tuberculosis and a hospital for contagious diseases. These three groups contain in all 37 buildings. As soon as Congress shall make the necessary appropriations work will be commenced.

The general hospital will consist of an administration building, a surgical building, pathological building, nurses' home, domestic service building, superintendent's house, ambulance stable and fourteen two-story ward building. The tuberculosis hospital will consist of two large and one small ward building, and the contagious hospital will consist of an administration building, domestic service building, nurses' home and four large ward buildings. There will be a central lighting and heating plant. Should the whole hospital be completed in accordance with the present plans, it will accommodate about 1,150 patients.

THE MINNESOTA STATE FAIR will be held at Midway the first of next month. It is understood that the attractions of this fall's gathering will far surpass other similar occasions in some particulars. Not many progressive men in the northwest will fail to attend this fall, above all others, unless unavoidably detained at home. The Minnesota State Fair Association is better equipped for holding successful fairs than any other similar organization in the country, and all the officials are energetic, capable and eminently reliable in all they promise for the good of the public.

TREATMENT OF CHRONIC INFLAMMATION OF THE UTERINE APPENDAGES. In a paper read before the section of obstetrics and diseases of women at the Saratoga convention, G. Betton Massey, M. D., of Philadelphia, said that chronic inflammation of the uterine appendages, occurring in young women in whom acute symptoms are absent, and in the later stages of pelvic peritonitis, is amenable to pervaginal mercuric cataphoresis, provided the affected tubal tracts possess proper drainage, whether pus-tubes exist or not. Intra-uterine electric treatment of any kind is usually contra-indicated, but in the procedure devised by the reader of the paper, the electrolytic salts of mercury are repeatedly forced by electricity from a large amalgamated brass electrode through the vaginal wall into the affected parts. Temporary lessening and sometimes temporary suppression of menstruation usually accompanies the treatment. Four cases successfully treated were described, in three of which large masses in the region of tube and ovary disappeared after prolonged treatment.

FAMOUS HANGING GARDENS. World's Fair Grounds, St. Louis, July 19.—When the Louisiana Purchase Exposition directors located the World's Fair in beautiful Forest Park, with its hills and valleys and picturesque woodlands, they had in mind the possibilities there presented for a landscape picture that would include a series of hanging gardens and cascade effects to rival, if not surpass in grandeur, the world's famous hanging gardens of Babylon, of China and Arabia.

More than a thousand men and two hundred teams are now engaged in grading the hills on two sides of the big exhibit palaces into terraces, rising one above the other, and these terraced gardens are to be the hanging gardens of the World's Fair of 1904.

The hanging gardens of Babylon, constructed over 500 years before the Christian era, were reckoned at that time among the wonders of the world. There were five of these gardens at Babylon, each consisting of an artificial hill, 400 feet square, the sides divided into terraces of earth resting on stone platforms covered with groves, avenues, and beds of flowers, and provided with galleries and banqueting rooms. They were irrigated from a reservoir at the summit filled with water raised from the Euphrates, just as the hanging garden cascades of the World's Fair at St. Louis will be irrigated from the big 40-acre reservoir on the ground recently acquired for that purpose, to which water will be raised from the Mississippi river.

There are today many hanging gardens in various parts of the world, particularly on the mountain sides in China, water being raised in buckets sometimes thousands of feet to irrigate them. Colonel S. B. Miles of the British army has just described the hanging gardens he found on the mountains in the interior of Arabia, about sixty miles southwest of the trading port of Muscat. Visitors have to cross a stretch of desert to reach this beautiful region of verdure amid the thirsty lands. One of the inland towns is Sheraizi, perched on the brow of a lofty cliff which falls to the valley beneath. The town is built on so steep a declivity that the houses appear to overhang one another, the only communication being by means of steps leading from one to another row of buildings.

These extensive gardens, spread along the precipitous valley walls are the most beautiful feature of Sheraizi. The whole face of the mountain side to a depth of over 1,000 feet is cut into parallel series of ledges or terraces. Owing to the sharp angle of the slope the ledges are not over ten to twelve feet in width. The inhabitants would be glad of greater depth of soil and the garden spots have been enriched by a large amount of fertile earth brought to them. The steep mountain side is almost barren, except for the beautiful strips of green where vineyards, orchards and wheat fields are bearing. These curious gardens with their varied foliage and ripening fruit, grain and vegetables, form a very attractive and pleasing sight.

INFANTILE DIARRHEA. This subject will be one of preponderating interest and importance to physicians during the summer months, particularlv in our denser centers of population. When we take into consideration the delicacy of the gastro-enteric tract of children under two years of age, the great prevalence of diarrhea among them during the hot weather, it is not surprising. Unquestionably, the causes are usually some form of poisoning that adversely modifies the digestive function, perturbs the *prima via,* and seriously diminishes the nourishment of the child, and taxes its resisting and recuperative powers almost to, and often beyond, the utmost limit of its endurance.

It is fair to assume that the normal secretions of the mucous membrane of the stomach and bowel are adequate to meet the ordinary strain that may be put upon them for the digestion of suitable foods, and the destruction of a limited amount of infectious material. In all probability, the first step in the production of summer diarrhea consists in a disarrangement of the digestive functions, from their over-strain by either excessive or improper feeding, or both combined, the evil effects of which the child is less apt to withstand because of the debilitating effects of persistent high temperature in summer, which is also increased by the resulting cutaneous irritations, one of the commonest of which is so-called prickly heat. Disarrangement of the digestive functions diminishes resistance to infection, mainly because of the adverse modification of the digestive fluids that must be depended upon for this purpose. Once the infectious process is begun, it is a contest between the local cellular elements of the lining mucosa of the gastric enteric tube and the infectious bodies, called germs, and their toxines. Added to this is the rapid weakening of the child's vital forces, inanition and the usual strain of combating extraordinary infection.

The indications for treatment constitute a simple problem, often somewhat difficult of application. It is to remove all strain from the digestive organs at the same time that the stomach and intestinal canal are swept clear of all offending material, after which the digestive tube should be secured perfect rest until it has recovered its normal tone. These indications are carried out by the stoppage of all feeding, and the administration of a suitable purge, than which none is so desirable as calomel, which may be given in doses of one-twentieth to one-tenth of a grain at hourly intervals until effective. The loss of liquids consequent upon the diarrheal discharges should be amply made up by the free ingestion of liberal supplies of cool sterile water, the quantity being limited only by the child's willingness to take it.

The danger to life from inanition is insignificant in cases of true cholera infantum, as compared with that of rapid poisoning by toxines, and collapse from excessive loss of fluids. It may, therefore, be truly said, that the most important indication in the treatment of cholera infantum consists in thorough and expeditious clearing out of the stomach and entire intestinal tract. There is no sense in this procedure unless all food is temporarily withheld from the child other than sterilized water, as it would only afford additional means of infection and undue strain upon the disarranged digestive organs. In the event, however, of extreme weakness, it may be judicious to administer some of the pre-digested foods containing a small proportion of alcohol, for the stimulating effects of this ingredient as well as of the meat elements they contain.

We feel constrained to say, therefore, that that man stamps himself as being unfamiliar with the most recent advance of the pathology of this affection, who questions the deadly influence of infection in the production and aggravation of this disease.—Med. Council.

CINNAMON-WATER AS AN ANTISEPTIC. Oil of cinnamon in aqueous solution acts like magic as a local disinfectant. In a recent wound of any kind, after stitching or whatever may be needed, keep a compress wet with cinnamon-water constantly applied until healing is complete, which usually takes place without suppuration. It takes the place of corrosive sublimate and everything else. It is pleasant to use, cleanly, non-toxic, safe, and cheap. As a douche after paturition it is ideal, not often requiring to be used more than two or three times. I add 3 or 4 drops of the oil of cinnamon to 2 quarts of warm water, and direct it to be used as often as there is any scent to the lochia. In nasal catarrh it serves well, and, in fact, wherever a germicide and disinfectant is wanted.—Medical World.

THE PREVENTIVE AND CURATIVE TREATMENT OF HAY FEVER. It is difficult to conceive of a more miserable creature in all the world than the hay fever sufferer. The attack not only makes him exceedingly uncomfortable, but renders him unfit for business or the pleasures of society. Aside from the annoying and continual discharge of the nostrils, the eyes are suffused, the secretion of tears is increased, the nasal passages are obstructed, and an intense burning sensation is experienced: the latter is not entirely limited to the mucous membranes, but not infrequently involves the cutaneous surface of the forehead, cheeks and nose. Violent attacks of sneezing occur which are so prolonged, at times, as to completely exhaust the sufferer and bring on severe headache. The condition is one of utter wretchedness, and there is extreme malaise, amounting occasionally to complete prostration. The lightest duties become irksome tasks, and many an active, industrious, and useful member of society is completely incapacitated while "the season" lasts.

For years convenient means of relief have been sought. Change of scene does very well for those, unfettered by business, who can afford to travel. But to many worthy people a change of scene is out of the question. Naturally the greater number of the afflicted are accustomed to look to the medical profession for the help they need. But what has the medical profession actually accomplished for the permanent relief of the sufferer or the cure of his ailment? There is scarcely a sedative, astringent, tonic, nervine, or alterative drug in the materia medica that has not enjoyed an evanescent reputation as a useful remedy in the treatment of hay fever. Until the discovery of Adrenalin, each had been as much of a disappointment as its predecessor, and none had afforded more than the merest temporary relief.

There is increasing evidence that Adrenalin fully meets the indications as a remedial agent in hay fever. It controls the nasal discharge, allays congestion of the mucous membranes, and in that manner reduces the swelling of the turbinal tissues. As the nasal obstruction disappears, natural breathing is materially aided and the ungovernable desire to sneeze is mitigated. In short, a season of comparative comfort takes the place of the former condition of distress and unrest. Adrenalin blanches the mucous membrane by vigorously contracting the capillaries, and thus reduces local turgescence. It strengthens the heart and overcomes the sense of malaise so frequently a prominent feature in cases of long standing.

In the treatment of hay fever the Solution of Andrenalin Chloride should be used. This preparation is supplied in the strength of one part Adrenalin Chloride to one-thousandth part Normal Saline Solution and is preserved by the addition of 0.5 per cent. Chloretone. The 1-1000 solution should be diluted by the addition of four parts Normal Salt Solution, and sprayed into the nares with a "Cocaine" atomizer. In the office, the 1-1000 solution may be applied in full strength. A small pledget of cotton is wrapped about the end of an applicator and moistened with a few drops of the solution (1-1000). The speculum is then introduced, the patient's head is tilted backward in a position most favorable for thorough illumination by the head-mirror, and the visible portions of the lower and middle turbinate bodies, and the ceptum, are carefully and thoroughly brushed. The same application is made to the other nostril, when usually relief follows, in a few moments. Should the benefit prove only partial, the 1-5000 solution may now be sprayed into both nares, and a few drops installed into both eyes. The effect of this treatment may be expected to last for several hours. Indeed some physicians report that it is necessary to make but one thorough application daily to afford complete relief.

It is also recommended that Solution Adrenalin Chloride be administered internally in 5 to 10 drop doses, beginning ten days or two weeks prior to the expected attack. In explanation of the beneficial effect of the drug when used in this manner, the suggestion has been made that hay fever is essentially a neurosis, characterized by a local vaso-motor paralysis, affecting the blood supply of the eyes, nose, face, and pharynx, and occasionally of the largngeal and bronchial mucous membranes. Adrenalin overcomes this condition, restores the normal balance in the local blood pressure, and thus aids in bringing about a cure. The profession is to be congratulated that it has at last an agent that, if not a specific, fulfills the therapeutic indications more completely and with greater satisfaction than any other remedial measure recorded in the history of medicine.

A STRANGE TALE comes from New Haven, Conn., to the effect that with a round loaf of rye bread, three lighted candles stuck through the crust as points of an equilateral triangle, Noritz Kopperl, an Austrian, located a drowned body in West river after all other efforts had failed.

John Birmingham, 13 years old, was drowned there while bathing. Men dragged the river unsuccessfully. Kopperl, a fruit vender, about 45 years old, happened along in his wagon and became interested. He told Sergeant McGuire of the police squad how the Hungarian peasants find a drowned body. The crowd laughed derisively. Kopperl soon returned with a big round loaf of bread and three candles. He inquired at what spot the boy went down, and, placing the loaf in the river at that point, lighted the candles, already set into the loaf.

"This loaf will follow the course of the body. Put your hooks in where it stops," were his directions. The bread circled several times and floated down stream. It soon stopped as if held by some barrier. The searchers threw their hooks in and brought the body to the surface, scarcely a yard from the loaf.

Dana Dudley, a Wakefield, Mass., inventor, is constructing what he calls an aerial locomotive for the World's Fair airship contest. He says: "I don't see anything but success. In my models I can send freight, even eggs, safely against any wind and use no balloon. In time the balloon may be dispensed with in passenger machines. The reason I call them locomotives is because, eventually extra cars will be hauled by the aerial locomotives. I can even now dispense with the propeller fan and gasoline motor and get more pulling power, and dispense with those weights."

THE SOUTHERN MINNESOTA MEDICAL ASSOCIATION will hold its eleventh annual meeting at Owatonna on Thursday, August 7. The following is the announced programme:

1. Invocation—Rev. W. N. Jamieson, Owatonna, Minn.
2. President's Address—Vital Force—Its Relation to Other Forces—Dr. A. S. Adams, Rochester, Minn.
3. A Few Facts Concerning Our Present Practical Knuowledge of the Common Infectious Diseases—Notes on Modern Advancement—Dr. Franklin Staples, Winona, Minn.
4. Microbic Infections from a Clinician's Standpoint—Dr. C. A. Corley, Medalia, Min.
5. Suppuration of a Previous Urachus—Dr. R. C. Dugan, Eyota, Minn.
6. Empyema, with report of cases—Dr. E. H. Bayley, Lake City, Minn.
7. Intestinal Obstructions, with report of case, Dr. J. W. Andrews, Mankato, Minn.
8. Cancer of the Gall Bladder—Dr. W. J. Mayo, Rochester, Minn.
9. Pneumonia—Dr. T. L. Hatch, Owatonna, Minn. Discussion, Dr. C. L. Green, St. Paul; Dr. J. W. Bell, Minneapolis.
10. Some observations on Pueperal Eclampsia Dr. J. B. McGaughey, Winona, Minn.
11. Medical Men in Sanitary Work—Dr. H. M. Bracken, Secretary State Board of Health of Minnesota.
12. Myocarditis — Dr. A. W. Stinchfield, Rochester, Minn.
13. Appendicitis from the patient's standpoint —Dr. H. H. Witherstine, Rochester, Minn.
14. Modern Views of Medicine—Dr. D. M. Cool, Faribault, Minn.
15. A Measley Communication—Dr. J. H. Adair, Owatonna, Minn.
16. Report of cases of Post Pharyngeal Abscess in infants—Dr. W. T. Adams, Elgin, Minn.

There will be present at the meeting Dr. Alex. J. Stone, Dr. C. L. Green, Dr. Burnside Foster, Dr. H. M. Bracken of St. Paul, Dr. J. E. Moore, Dr. J. W. Bell, Dr. R. C. Todd, Dr. Geo. Head and others of Minneapolis.

MEDICAL DIAL

A Monthly Record of Medicine and Surgery

Published by MEDICAL DIAL COMPANY

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Medical contributions respectfully solicited from Regular Physicians. The editor or publishers will not be responsible for the opinions expressed by correspondents. No attention paid to anonymous communications. Contributors will be furnished with a reasonable number of extra copies, gratis, for distribution among their medical friends. Reprints furnished only at actual cost.

Entered in the Post Office at Minneapolis, Minnesota, as Second Class Matter.

SUBSCRIPTION PRICE

United States, Canada and Mexico, per annum, in advance, - - - - - - - - - - - - - - $1.00
Foreign Countries in the Postal Union, per annum, in advance, - - - - - - - - - - - - - 1.50

N. B. Matter for the reading pages should reach office of publication on the 20th of the preceding month and display advertising on the 25th, to insure attention.

Vol. IV MINNEAPOLIS, MINN., SEPTEMBER, 1902 No. 9

MEDICAL SCHOOLS AND TEACHING. As the time for the annual opening of medical schools is approaching, a few words as to historical events and suggestions are in order. In 1782-3 three medical professorships were established in Harvard University, two of which were filled by the same person for some time, and fifty years ago there were only seven professors in the "Faculty," and now there are over one hundred included in the list of professors and instructors connected with the school. While it is true as Dr. O. W. Holmes once remarked, "That the animal with the greatest number of legs was not the swiftest runner," it will be generally admitted that in this minute division of teaching the student ought to receive the highest standard of training in his medical education; and a diploma from that institution is a first-class recommendation for a high standing in the profession.

It has been suggested by some that the teachers in medical schools should devote their whole time to the work with the classes, and in some branches of study this would be of special advantage, and in some schools is already adopted to a limited extent. Anatomy, physiology, chemistry and bacteriology are subjects that suggest themselves as proper for life devotion by teachers, and in these departments are usually found men enthusiastic in their work, and they cannot fail to interest students favorably, much more so than other men would who only teach, as a side issue in their daily occupations. In the departments of practical medicine and surgery, however, we believe the teachers best adapted to impart useful information to the students will be found among those who are fully and successfully engaged in general practice, and have wide experience in surgery and the treatment of diseases. Theoretical knowledge is necessary, the more the better perhaps, and a thorough preliminary education as a basis for mental discipline and judgment highly desirable, but object lessons in clinical teaching by the masters of the profession make more lasting impressions on the minds of the students, and give them more confidence in their preparation and ability to meet the obligations and duties that must fall to their lot in life work.

THE LATE OUTBREAK OF SCARLET FEVER AT HOPKINS. A serious disturbance has been created at Hopkins, Hennepin county, among the residents by the appearance of an epidemic of scarlet fever or something so nearly resembling it as to create a dispute among the local physicians as to its real character. Physicians from Minneapolis have diagnosed the disease as the real thing, and the State Board of Health has been called upon to enforce quarantine in a legal manner. From some reports it is inferred that instances of great carelessness have occurred by allowing infected children to play in the streets with other and healthy neighbors. The benefit of even a doubt in such cases should be given the well to prevent the spread of disease.

SURRA. Surra, a disease not unknown in the east, is said to be prevailing in the Philippines among the horses and mules, supposed to have been imported from China. It has been investigated diligently by Drs. Allen M. Smith, of the United Staes army, and J. J. Kinyoun, of the Marine-Hospital service.

The disease is caused by a parasite, a protozoon trypanosomidæ, order monadida, subclass flagellata, class mastigophora. As described by Smith and Kinyoun, it resembles a whip-like worm, having the appearance of trichocephalus dispar. It is from 10 to 14 microns in length and from 1 to ½ microns in diameter. It is actively motile having both a vermicular and spiral movement; it has been found in the blood of horses, mules, camels and elephants, and may be transmitted to cattle, buffaloes, sheep, goats, rabbits, guinea-pigs, rats, dogs, cats and monkeys. Birds, reptiles, amphibia or fish are not known to harbor this parasite, although they may be infected with trypanosoma of other species. Nepveu and Dutton have reported the presence of trypanosoma in man, but the evidence and details in the cases are not complete. The parasite invades the blood, causing a rapid and progressive destruction of the red blood corpuscles and hyperleukocytosis. The red blood cells lose their individuality and run together into irregular masses. The prominent clinical symptoms are an intermittent, remittent and sometimes a relapsing type of fever which continues from a few days to months, occasional appearance of uticaria, general or localized, petechiæ on the mucous membranes, edema, lachrymation, rapid and progressive emaciation, extreme debility and progressive anemia. Death invariably follows, and it may be caused by exhaustion or some intercurrent disease. No specific lesions are found on autopsy; there are generally small subpleural and subendocardial extravasations, together with enlargement of the liver and spleen.

This disease is known under a variety of names, each denoting a symptom or certain stage of the malady, but none could be accepted as a proper technical term. To prevent confusion arising from the use of some fifty names applied to the same disease, the authors of the report suggest the term TRYPANOSOMIASIS, signifying infection with trypanosoma of whatever origin. This term is intended to include, but not entirely to supplant, the names "tsetse-fly disease" and "surra," these terms denoting varieties.

Surra bears a close resemblance to malaria, the parasite belonging to a similar group of hematozoa, and the two have in common the absence of specific lesions, the pathological changes in the liver and spleen, the same character of fever and profound toxemia; but surra is more severe with absence of chills and perspiration and other minor clinical manifestations; but the analogy holds good in regard to climatic influences and the manner of infection. The disease prevails especially during the rainy seasons. It is in evidence that the infection takes place through the blood, the parasite gaining access through an abrasion in the skin or mucous membrane. The carriers of the disease are no doubt biting insects, but it is not supposed that the insects in this disease are the intermediary hosts, as is the case in malaria and yellow fever. Treatment so far has proved ineffectual. Various remedies, such as mercuric chloride, iodine and its compounds, carbolic acid, etc., have been tried without making any permanent impression on the malady. Orders have already been issued by the Secretary of Agriculture prohibiting the importation of animals from the Philippines into the United States.

THE CORONATION. The successful coronation of King Edward the VII. occurred on the 9th inst., notwithstanding the prediction sometime ago by a self-made prophet and the partial belief of the king himself that he would not live to be crowned. That he had a very narrow escape from death is certain, and modern surgery should have the chief credit for saving a life so momentous in the consideration of millions of his subjects and other national interests.

DR. LEONIDAS H. LAIDLEY. Dr. Leonidas H. Laidley, of St. Louis, is to be medical director of the St. Louis World's Fair. The doctor was born September 20, 1844, at Carmichaels, a Pennsylvania village in the valley of the Monongahela. He was the tenth of twelve children reared by his parents, Dr. Thomas H. Laidley and Sarah (Barclay) Laidley. He was educated with a view to the medical profession and entered Cleveland Medical College in 1866. The following year he entered Jefferson Medical College at Philadelphia, attended the hospitals and enjoyed the teachings of the most noted faculty of that day, including Dungleson, Gross and Pancoast. After graduating in 1868, and practicing a while with his father and his brother, Dr. John B. Laidley, he went to New York and entered Bellevue Hospital Medical College where he took a higher and more thorough course graduating with distinction in 1872. Coming to St. Louis the same year he entered upon a successful career both as a practitioner and a medical teacher, showing always a decided love for the humanitarian side of his profession. He organized the Young Men's Christian Association and attended the sick applying to that institution for aid. He organized the free dispensary which became the nucleus of the Protestant Hospital Association. He filled the chair of anatomy and chemistry in Western Dental College of this city and after the organization of the St. Louis College of Physicians and Surgeons was called to its chair of surgical diseases in women. After filling that chair five years he was called to the same chair in Beaumont Hospital Medical College, which he still holds, being also surgeon to the Protestant Hospital and Consultant to the Female Hospital of St. Louis. Dr. Laidley is a member of numerous Medical Associations and Societies, was a delegate to the British Medical Association held in 1883, and the same year visited the hospitals of Edinburgh, London and Paris.

Dr. W. A. Mann has returned from West Baden. He says his three weeks' outing there makes him feel five years younger.

Colonel William H. Forwood, M. D. assistant surgeon-general, was promoted to be Surgeon-General U. S. Army, vice Brig.-General George M. Sternberg, M. D., retired June 7, 1902. General Forwood will retire September 7, 1902, after but three months' service as head of the Medical department of the army.

One of the features of the "Model City" at the World's Fair in St. Louis will be a modern garbage "destructor," one that will destroy garbage without odor, smoke or offence of any kind.

Medical Articles.

THE MISPRONUNCIATION OF COMMON MEDICAL WORDS.

By Florence C. Baier, M. D., Minneapolis.

Of the three so-called learned professions and, indeed, of all callings in which mental training is a prerequisite, the medical profession has stood alone as the one, the majority of whose members had little, if any, academic training. The virtual recognition of this state of things and its needed reform, is found in that the standard for entrance into medical colleges has gradually been raised until now, some, as Harvard and Johns Hopkins, admit none who cannot show a degree from some first class college, and most others require at least a full high school education or its equivalent. The man qualified only to drive and curry the doctor's horse can no longer pass from such avocation directly into the medical college. Nevertheless, to this day, the grievous lack of even a common English education is painfully manifest in the profession, and many "know little Latin and less Greek," when, without the former, at least, the doctor is greatly fettered in much of his work, prescription writing, for instance.

This article will touch upon one weak point betrayed by many physicians—the mispronunciation of common medical terms.

Teachers in the medical colleges—many of them men whose pre-medical training was scanty—are perhaps more to blame than others for the wretched pronunciation so common with doctors. It is difficult for a person little accustomed to the use of a dictionary to believe that an admired lecturer can be an authority in his subject, and wholly unreliable in so small a thing as pronunciation. Brought face to face with indubitable authority he remarks, "Oh, well, pronunciation has changed since my day."—"They are all the time altering these things." The truth is that correct pronunciation changes little, if any, at the present time. His instructor was inaccurate and he has unquestioningly perpetuated the teacher's errors. It is often claimed that usage is the only rule for pronunciation. Whose usage? If every speaker assumes his own usage to be correct, what final authority can there be but that of the dictionary? It will always be found that the speakers whose diction is unchallengeable are in close accord with the dictionary. I have always noticed that those who claim the most for the authority of "usage" are silent when an appeal to the dictionary goes against them.

A specialist in diseases of the skin was heard not long ago in a lecture on that most common of skin lesions, so pronouncing the word, that a hundred more men will leave college in the firm conviction that eczema is accented on the second syllable with a long e. Pemphigus, psoriasis, pityriasis may be accented either on the antepenult or penult—but preferably on the latter—according to several good authorities. General "usage" prefers the antepenult as the accented syllable.

A word that of necessity has been much used by the profession of late, is variola. The o is generally made long and strongly accented. Would it be recognized if properly dealt with, the i of the antepenult being made long and accented?

Many men who have spent their professional lives in the study and teaching of mental and nervous diseases, persist in the mispronunciation of words in daily use, as cerebrum, cerebral, paresis, all Latin words accented on the antepenult, with an obscure e in the penult. The penult is usually made long and accented.

The preferable pronunciation of neurasthenia places the primary accent on the i and that vowel is long in sound.—Usually the e of the antepenult is pronounced long and that syllable accented.

Gynecology is another word much abused in pronunciation by specialists and teachers in that branch of medical science, the first syllable being proounced as if spelled "guy." "C and g are soft before e, i, y, æ and œ, hard in other situations." Imagine a teacher of algebra or geography, year after year sending out classes firmly persuaded that the g in these words is hard! Impossible? Why? Because "the laity" know better. Can it be said that the doctor stumbles only on those words, as a rule, with which "the laity" are not familiar? Ginglymus comes under the same rule.

The author of a paper at a recent medical meeting discussed prolapse and relapse, accenting on the first syllable. They are derivatives and compounds of "lapsus," whose penult is long in quantity, hence must receive the accent.

The obstetrician often gives us uniparous, multiparous, nulliparous as if each were two words, uni parous, multi parous, nulli parous. Place the accent where it belongs on "nip," "tip," "lip," and the component parts are deftly united. Abdomen, albumen, conium, cicatrix, are all Latin words with a long vowel in the penult, which should therefore receive the accent. More often than otherwise, the first syllable is accented.

With the common tendency to make an e in the penult long and accented, popliteal, peroneal, perineal, gluteal, gluteus, ureter, sclerema ought not to escape correct treatment, but with unexplainable perversity these words are quite as often accented on the antepenult. On the other hand, laryngeal, pharyngeal, coccygeal, œsophageal, meningeal, pectineal, epiphyseal, genesis and its compounds, all properly accented on the antepenult, quite as often as otherwise are pronounced by the lecturer as if the penult were long in sound and quantity. Enema is similary misused, and in addition, has its dignified Latin plural—enemata—pushed out of existence by a bran-new hybrid, "enemas."

Because tympanum has its accent on the first syllable—its derivative adjective tympanic is forced into a similar accentuation, when properly the accent is on the middle syllable. The obstetrician makes an error of the opposite sort. Because umbilical takes the accent on the "bil," his tongue craves the same indulgence for umbilicus, properly accented on the penult where the i is long in sound and quantity.

Some words serve as two parts of speech, distinguished by varying accent or sound of some letter. "Rise" as a verb is pronounced as if spelled "rize": in the phrase "rise of temperature," as if spelled "rice." How many physicians are careful to make the difference?

In the words uterine, intestine, vaginal, cervical, the i is unaccented and short. It is often made long in all—and, in addition, is often accented in the last two. Radical, a word much used by "the laity," is never mispronounced. Yet radical, from the Latin word radix, may as well be given a long accented i in the penult as cervical from cervix.

Examples of words having a long a in the penult, yet commonly pronounced like a in an, are the following: digitalis, ovale, foramen, anus, anal, oblongata, status, valence, varus, varix, dorsalis, and indeed all adjectives of Latin form having the ending alis or ale, as brachialis, marginalis, lachrymalis, etc.

Medullary, maxillary, dysentery, varioloid, are examples of long words—like the word dictionary—with but one accented syllable and that the first. The rest of the word, so to speak, should be let alone, so far as accent is concerned, but no, a secondary accent, nearly as vigorous as the primary, is almost invariably placed on the next to the last syllable. Medullary, however, is often accented, like medulla, on the "dul." Respiratory, inspiratory, expiratory, are all treated to a strong accent on the first syllable (in memory of the accent of the nouns from which they are derived), when preferably the second syllable receives the accent and the i is long.

Lavage, pronounced lahvahzh, and gavage, pronounced gahvahzh, are often improperly anglicized, to lav-age and gav-age. Jaundice is often flattened to jandice—cāries to căries. Erysipelatous, properly accented on the "pel," is forced into a verisimilitude to its noun until the a is reached which is vigorously pounded and lengthened.

A large class of words with the ending itis are pronounced by some with the first i having its long English sound, by others with the long sound of e. Both pronunciations have the sanction of the dictionaries. The former is certainly to be preferred. The latter is the Roman or Continental pronunciation, and if allowed at all should obtain throughout the word. We should then say oppayndikeetis, and in meningitis the g should have the sound of g in get.

Cocaine, codein, words of three syllables, are commonly shortened to two, and the accent, especially of the first misplaced. Cimicifuga should be cented on "cif."—as u is seldom long in the penult, in Latin words. Acclimate should be accented on the second syllable, and this accent is retained in its participles and derivatives.

These are but a few of a multitude of technical terms commonly mispronounced by the only ones who employ them, and who should know better. The man who is at sea without rudder or compass as regards pronunciation, will object to the criticism: "Mispronunciation is but a trifle." Perhaps so. "Trifles make perfection and perfection is no trifle." One's educational limitations are unerringly revealed by this "trifle"—a matter of some moment when one is serving those better equipped educationally than himself. There may be some people so illogical (?) as to harbor the thought that he who "murders the King's English" and its venerable Latin ancestor in ignorance or carelessness, may not be more exact in the use of his knife and his nostrums.

THE PLACE OF DRUGS IN THE TREATMENT OF STOMACH TROUBLES.

By Boardman Reed, M. D. Read at annual meeting of the Alabama State Medical Society.

The place for drugs in the treatment of many stomach troubles is in the drug-store. This is true not only of certain affections, such as some of the forms of nervous dyspepsia, and of gastralgia, etc., which are frequently merely symptomatic of disease in the nerve centers or elsewhere; it is true also of some others which really do involve the stomach.

The drugs that are usually so freely administered in these cases without an exact diagnosis having first been made would be far better in the drug-store than in stomachs which do not need them—to which also they are often sadly unsuited.

At all events, it is likely that the majority of medicines administered empirically in cases of so-called dyspepsia, do more harm than good; and even after an accurate determination of the actual existing pathologic condition by a thorough external examination of the abdomen, a urinalysis and a chemical and microscopic examination of the stomach contents (with possibly one also of the feces), it is often found that hygienic or mechanical measures, such as a carefully selected diet, a freer use of pure drinking water, exercise, massage, electricity, etc., will accomplish much more than any course of medication.

Besides the numerous cases of indigestion which result directly or indirectly from imprudent eating and imperfect mastication, a large proportion of complaints of pain or discomfort in the stomach are either reflex phenomena or functional disturbances, the indirect consequences of unhygienic habits of work or play. Inordinate mental or nervous strain results in persons who have long overworked or over-dissipated with the help of stimulants (such as alcohol, strong coffee or tea, etc.), or of powerful nerve tonics; also, and perhaps with almost equal frequency in persons addicted to sexual excesses or irregularities, including those who indulge in ungratified sexual excitement, as occurs so often with engaged lovers. In married persons, too, when the attempt is made to avoid offspring by incomplete ciotion (*coitus interruptus*) the nervous system is always seriously injured sooner or later in one or both, and in all these instances of unnatural or unhygienic sexual practices the digestive function would seem to be often prominently involved.

In the neuroses of the stomach and in gastric upsets through the medium of injured nerve centers, drugs, while useful at times, especially for temporary alleviation, should play a subordinate role. This is particularly true when stimulants and nerve tonics have been already abused. What is wanted here is to get rid of the cause—*tollere causam*—besides rest and time for recuperation of the exhausted nerve centers, with outdoor air, plenty of natural sleep, nourishing food, change of climate, sometimes, and often the mechanical methods of treatment. The over-ambitious professional or business man must be gotten away from his too engrossing occupation by a sea voyage or sojourn at the shore, a hunting trip, or, in the worst cases, a rest cure, when there is nervous prostration showing itself often most conspicuously by anorexia in addition usually to headache and insomnia, by nausea and vomiting after meals, and sometimes by severe gastric pain as well, without any organic basis for such symptoms being discoverable in the digestive tract.

In the case of the betrothed couple, one of them needs to be sent away, it matters little which one, for a month or two at least, and usually it is better that they remain apart till the wedding day. In a number of instances I have been obliged to send to a sanitarium, or upon a prolonged trip, the weaker of a couple of engaged young people, most commonly the lady, though not always because her stomach has given out. In some of the cases there would be good health for a short time after marriage, till the results of the prevalent conjugal onanism, practiced to prevent conception, began to impair the nervous system of the weaker vessel again, when I would ward off another threatened breakdown by a stern moral and hygienic lecture. Then for a time all would go well again; I would lose a patient and some obstetrician or family physician would gain one.

More hygienic habits and a more physiologic way of living, aided by a period of partial or complete rest, and when necessary by electricity, especially the galvanic or high tension faradic currents intragastrically, light exercise, either active or passive, or both, and by the judicious use of water internally and externally, will cure most cases of neurasthenia with very few or no drugs, whether the gastro-intestinal tract or other regions be prominently implicated. Still, the usual nerve tonics, such as small doses of the bromides, the hypo-phosphites, the glycerophosphates, dilute phosphoric acid, and the preparations of iron, zinc, arsenic, silver, and gold can often be so judiciously employed as to assist the cure in cases in which they have not already been long administered for the reprehensible purpose of enabling the patient to go on overdoing or to persevere in violating Nature's laws in other ways.

The great secret in such conditions is to study each case by itself with the knowledge ever in mind that while some neurasthenics and nervous dyspeptics do not respond to anything less than the largest doses of nervine remedies (though even these patients are injured by them finally), others are seriously over-stimulated—poisoned really—by what might seem ridiculously small doses. The only safe rule is to begin with minute doses and gradually increase if necessary, always being content with the smallest that will produce the desired effect. When these cases of nervous dyspepsia are long neglected, serious derangement of the gastric secretion and impairment of the gastric motor power are likely to occur. Then certain special stomach remedies may come in place.

In diseases that really involve the stomach, there is frequently a place for drugs, and in certain of them a very important one, when you have learned exactly in what way the organ is affected; but the fact needs to be strongly emphasized that the old-fashioned method of treating all dyspeptic complaints as a single entity, and pouring into the unfortunate victim an endless variety of alleged remedies at random, is a dangerous kind of experimenting, which in this age of the world, with our improved methods of reaching an accurate diagnosis, is no longer defensible. It can only be excusable to prescribe thus blindly in cases where, on account of acute disease or of extreme age or debility, the use of the tube or of any intragastric instrument is impracticable. Even in such cases, however, very much can often be done by an expert external examination to aid in reaching a definite diagnosis, particularly with regard to the size, position and motor power of the stomach, as well as the fixity of the kidneys, one or both of which will be found loose and more or less movable in a very large proportion of our modern women who conform to the prevalent fashions in dress; also in the position, sensitiveness and size of the colon, especially its head and transverse portion. All of these conditions have a direct bearing upon the functioning of the stomach, and an accurate determination of them, or even the most important of them, will enable you to use drugs with much greater precision and prospect of benefit than is possible without such knowledge.

The administration of alkalies is generally necessary in excessive secretion of the HCl of the gastric juice, whether it be in the form of an excess of the same during the digestive periods only, as is most common, and known as hyperchlorhydria, or a persistent flow during all the twenty-four hours of every day, as in Reichmann's disease or a paroxysmal flow with very large excess for a few days at a time, as in gastroxvnis. This treatment is necessary whether the HCl excess is a merely functional derangement, or is associated with either an acid gastric catarrh or with round ulcer of the stomach. The selection of the alkali in such cases is not a matter of indifference. When the bowels are not in need of a laxative, sodium bicarbonate in doses of from 15 to 60 grn. given two hours after each meal, and in the worst cases combined for a week or two at first, with small or moderate doses of either belladonna or atropine, will be usually most useful. Sometimes it is better to administer, at the same periods, a combination of sodium bicarbonate, 15 grn.; bismuth subnitrate or subcarbonate, 15 grn., and calcined magnesia, 10 to 20 grn.; according to the condition of the intestines, the dose of the magnesia being tdjusted so as not to allow constipation to result from the bismuth. In many such cases magnesia, having a far greater alkalinity, acts better than soda, since large doses of soda are required when the latter is given alone.

In the constipated cases, a similar combination with a sufficient increase of the magnesia to insure regular evacuations, usually suits well, and the balladonna here affords valuable assistance in bringing about a freer opening of the bowels. The HCl excess often depends upon reflex irritation from a movable kidney, and then drugs will do little good till the latter can be held in its normal place.

When the hyperchlorhydria has already developed into gastric ulcer, the opportunity is afforded for some of the most brilliant results obtainable in the therapeutics of any chronic disease. The patient then needs to be confined at first strictly to bed and fed for one or two weeks by nutritive enemas exclusively; after that food by the mouth may be taken. One or two goblets of milk, containing preferably a tablespoonful or two of lime water in each, should be given every two or three hours during the day and evening, with an enema of eggs and milk or beef juice, in addition, once or twice daily. Bismuth's subnitrate or subcarbonate must then be given in doses ranging from 30 to 40 grn. and sometimes 60 grn. three times a day, from the beginning of treatment, and when the excess of HCl is very large or persistent, it may be necessary to give besides the combination of alkalies and belladonna above mentioned. After a week or two in bed with such treatment, the patient may be allowed to sit up and exercise a little about his room, but the predominant milk diet with the addition gradually of other bland foods, such as plasmon, beef juice, and soft eggs, and the same medicinal treatment, should be continued for two or three weeks longer at least, when in most cases the ulcer will be found to have been healed.

In the case of ulcers in which there has not been any recent hemorrhage, experts with the stomach-tube no longer hesitate to make tests of the gastric juice, though I would not recommend those who are not adepts in introducing the tube to venture upon its use in such cases. Massage of the abdomen is contra-indicated not only in ulcer but also in all the forms of hyperchlorhydria.

In the opposite condition of a deficient secretion of the gastric juice, especially of the HCl—such as obtains generally in old cases of chronic gastric catarrh of the atonic type, and even also in some cases of chronic nerve exhaustion of long standing—an entirely opposite line of treatment is necessary. In many of these cases nothing effects such prompt beneficial results as the administration of the official dilute HCl in doses of from 5 to 30 drops, combined usually with pepsin. Rarely have I found it advantageous to increase the dose beyond the latter amount, even when the deficiency in the secretion of HCl has been very great, notwithstanding the recommendations of some high foreign authorities in favor of colossal doses of the acid. These recommendations are based upon theoretic grounds, especially the fact that it would require several drams of the dilute HCl to meet the requirements of the stomach in the digestion of a large mixed meal. The truth is that the usefulness of the HCl as a remedy consists mainly in its stimulating action upon the secreting cells of the stomach, and prabably not to any considerable extent upon its power of supplying the place of the absent or deficient gastric juice. My own experience, which is amply supported by that of numerous other careful observers, proves beyond question that HCl does, in many cases, gradually bring up the secretion of the normal acid of the stomach to its proper level when deficient or even almost absent previously.

Experience demonstrates also that very large doses, and even in fact moderate doses, sometimes markedly disagree with stomachs which careful tests show to be greatly in need of the remedy. A burning pain is often produced by it in such over-sensitive stomachs, and it is necessary, therefore, in these cases, to administer it a little at a time. The appropriate dose should be added to a half tumbler of water and taken in sips every few minutes during the hour following each meal. I am accustomed to prescribe the remedy in this way in all cases where such a prescription is indicated, and my patients frequently allude to it familiarly as "the sips." In these cases characterized by deficient secretion, benefit may also be obtained often by the administration of the bitter tonics, especially nux vomica, quassia, columbo, etc., and Ewald, among other German writers, strongly recommends condurango bark for the same condition.

Massage of the abdomen and also exercises for the trunk muscles, such as body bendings, twistings, etc., are non-medicinal measures which help to restore the secretion of the gastric juice when the peptic glands have been impaired but not destroyed. When the HCl and pepsin, as well as the rennet ferment, are entirely wanting, as in gastric atrophy, it is generally best to abandon all efforts to promote peptic digestion and administer full doses of a good preparation of pancreas with an alkali.

In atrophy, too, strychnine may be useful to assist in overcoming any coincident deficient motor or propulsive power (which is an especially serious complication here), though gymnastics, massage, hydrotherapy, electricity, and especially intragastric faradism, will, any one of them, as a rule, accomplish more in such atonic conditions, as also in dilatation of the stomach from atonic causes.

Dilatation may also result from pyloric cramp, *i. e.*, a spasmodic contraction of the outlet of the stomach, which is usually dependent upon the combination of a hyperesthetic mucous membrane with a very excessive secretion of HCl (hyperchlorhydria)—possibly also a combination of the former with a large amount of free organic acids from the fermentation of carbohydrates. In such conditions, and also in gastralgia from excessive HCl or from an unknown cause, it is proper to administer soda, potash, or magnesia, in full doses, and, if necessary, at short intervals until relief, so as to neutralize beyond question all the free acid of any kind in the stomach; also belladonna for both its depressing effect upon the secretion of HCl and for its antispasmodic action. A course of arsenic may further be given for its specific nervine and antineuralgic action, though sometimes phosphorus or some other tonic will do as well, or better. This line of medication will generally be found more effective than opiates, which are now known to increase secondarily the secretion of the peptic glands, besides stopping the bowels and thus in the end often producing an aggravation of the gastric distress.

For the graver forms of dilatation due to tumors in or near the pylorus, or other mechanical cause of obstruction, surgical intervention alone can be effective, though lavage with antiseptics may palliate for a while.

As to gastritis in the acute form, after putting the patient to bed, stopping all food and allowing water in small frequent sips only, no medicines are really required as a rule, except when necessary to open the bowels. Then 1-10 to 1-3 grn. doses of calomel every half hour, or hour, till effect, will do more at first than anything else to hasten the subsidence of the nausea and vomiting, except a warm wet compress over the stomach externally and small pieces of ice internally. When such an attack persists after the calomel has acted, a mixture of bismuth 5 to 10 grn., with ¼ to ½ drop doses of carbolic acid favored with peppermint, frequently repeated, is very effective.

In chronic atonic gastric catarrh, the

bismuth and carbolic mixture will accomplish generally as much as any remedy administered per os, but lavage every day or two with a combination of soda and common salt in the first wash water (a teaspoonful of each to the quart), followed with a weak solution of alum (½ dram to the quart), silver nitrate (10 to 15 grn. to the quart), or other antiseptic astringent, can do still more in skilled hands; and the diet is all important. These solutions for lavage should be followed by washing out with a pint at least of warm water, and, in the case of a silver salt, with a solution of table salt.

Tumors of the stomach are always cases for the surgeon, except when malignant growths have progressed too far before discovered. In the time to come this will less frequently happen, because physicians will in suspicious stomach cases obtain expert counsel at a stage of the growth when the subsequent calling in of the surgeon will not be in vain. In non-operable cases of cancer or sarcoma the main reliance must be on opium. Lavage with antiseptics will prolong life and lessen the misery when the pylorus is involved with resulting dilatation.

In displacements of the stomach, unless the organ has been pulled down by a morbid growth, there is usually no need of surgery. Strychnine and diet will do something; abdominal supports, gymnastics, massage, electricity and hydrotherapy con do very much. Indeed in all cases I have ever seen, these measures, when they could be long persevered with, have effected marked improvement, and in most of the cases not too aggravated, a virtual cure has finally resulted.—Merck's Archives.

SURGERY OF THE HEART. By B. Merrill Rickets, Ph. B., M. D., Cincinnati. Abstract of paper read before Surgical section at the Saratoga meeting of the A. M. A.

Injury and surgery of the heart have, until recently, been classed as anomalies. This one fact shows how little confidence there has been in successfully dealing with the heart surgically.

At one time simple needle puncture of the heart was thought to always result in instant death.

Experimental physiology and surgery show what can be done and how to do it. It is the basis upon which heart surgery, especially has been placed.

Twenty-five dogs were used in the experimentations. Penetrating and non-penetrating wounds of the heart were made and closed with sutures of different material. Interrupted silk sutures were found to be the best.

No especial auseptic precautions were taken, as all pathologic conditions were desired.

The pericardium may be entirely removed without death resulting. Either one of the coronary arteries may be ligated at its base without producing death. In a certain class of cases it is best to suture the pericardium to the cnest wall that drainage may be perfect.

It is ideal to suture during systole, but one will be satisfied to secure perfect suturing in systole or diastole.

Even though the auricular is thinner than the ventricular wall it may be sutured with equal success. Owing to this difference in thickness the per cent of penetrating wounds of the auricles is much greater than those of the ventricles.

Knotting the sutures should be firmly secured, otherwise they may become untied by the constant action of the heart.

The sutures should pass through the bottom of the wound when non-penetrating and through the endocardium when penetrating. If not in the latter, the wound may become enlarged from within.

Sutures should not be made tight enough to cut the heart tissue.

The mortality is less in wounds of the right than those of the left auricle and ventricle. Bleeding is more severe in wounds from sharp instruments than when due to bullets.

CONCLUSIONS.

1. Injuries and diseases of the heart have resisted surgery longer than almost any of the tissues or organs of the human body.

2. They, however, no longer offer such resistance, but find themselves subject to attack by the same surgical principles as other parts of the body.

3. Experimental surgery teaches one to reason from animal to man.

4. Aneurism, foreign bodies, ossification, together with abscess, syphilis and

gangrene possess features which will have a great bearing upon, and will greatly influence the future surgical work of the heart.

5. The application of surgical principles in certain cases of aneurism of the heart will, no doubt, be accomplished by suture eloctrolysis, or the injection of gelatine or something of a similar character.

6. The removal of a certain class of foreign bodies, whether they have formed within or have entered from without, should, and no doubt will, be accomplished.

7. That a cardiac abscess should be incised and drained there can be no doubt.

8. Tumors of a pedunculated character on the external surface of the heart can and should be removed.

9. Pedunculated tumors within the cardiac chambers can also be successfully removed.

10. Parasitic cysts (animal or vegetable) when upon the external surface of the heart or in its wall should be incised and drained.

11. Mitral stenosis, hypertrophy and dilatation of the heart will sooner or later find complete or partial relief within the domain of surgery.

12. Injuries involving the myocardium are subject to the same surgical principles as injuries to other important organs of the human body.

13. Lacerated or incised penetrating or non-penetrating wounds of the heart should be sutured.

14. Suturing or any other surgical procedure should not be discontinued because the heart should cease to pulsate. The work can and should be completed within a much shorter time on a quiescent heart.

15. All means should be resorted to, while suturing of the myocardium is being completed, to re-establish the heart's action.

16. Drainage of the pericardial sac is necessary in many cases of injury of the heart.

17. Exploratory incision of the pericardial cavity and its contents has been shown by both experimental research and operations upon the living human body to be exceedingly rational, valuable and justifiable.

16. Exploration of the heart itself by puncturing it with a needle or knife to locate a foreign body or to detect pathologic conditions within the myocardium or its chambers, will at no far distant day be found useful, necessary and recognized as an accepted surgical procedure.

19. Why should these conclusions be fallacious when it has already been shown that fourteen of the thirty-five cases of heart wounds treated by suture have recovered?

CASE OF EXFOLIATIVE DERMATITIS DUE TO QUININE. By E. W. Reisinger, M. D., Washington, D. C. Reported, with specimen, to the Medical Society of the District of Columbia, January 22, 1902.

December 27, 1901, Mrs. C. called at my office and requested something for her husband, "who had the grippe." I inquired into his symptoms and "agreed" in the diagnosis, so prescribed six tablets, each containing acetanilid 92.i, salol 92.½ quin. bisulph. 92.i, to take one tablet every three hours.

Twelve hours later, December 28, I was called to see Mr. C., and obtained the following history:

Mr. C., white, age 45, Pullman conductor, took as directed the prescription I had sent him; two hours after ingestion of the second tablet (two grains of quinine altogether) the skin of his entire body began to itch, became red and swollen and had a drawn feeling. He suffered so much from the *intense* pruritus that he was greatly depressed, in fact, spoke of ending his life, and was unable to sleep or even remain in bed. Desquamation had set in when I saw him, his head and body being covered with fine scales, but his hands and feet were still red and swollen and had a dry, glossy appearance. He complained greatly of the "drawn" feeling over his entire body, as if his skin was too tight for him, as in fact it was. I diagnosed his case as "erythema due to quinine"—gave a cooling lotion internally, a carbolic acid wash for the itching, and stopped the tablets. Two days later his hands and feet shed their epidermis, and I secured a specimen which is a perfect "palmar surface of the left hand"; his right hand and both feet lost their cuticle in large casts, but not nearly so perfect. It took him at least a week to entirely recover, as his feet and hands were very tender after the desquamation.

Looking over the literature on this subject, I was struck by the smallness of the dose of quinine in similar poisonings and the few adult male cases reported. For instance, Dr. H. C. Wood, in his *Therapeutics,* says "a few grains of quinine" will produce erythema, etc.; he does not mention an adult case or one of exfoliation. Dr. B. D. Tillow (*N. Y Med. Record,* 1898) reports violent erythema in a woman from one-third of a grain, but dermatitis was not followed by desquamation. Dr. T. C. Johnson (*Jour. Cutan. and Genito-Urinary Dis.,* 1896) reports a case of a man who had two attacks, the first due to four grains of quinine and the second due to two 15-drop doses of compound tincture of cinchona—*i. e.,* about 3-20 of a grain of quinine. Dr. Morrow (*N. Y. Med. Jour.,* 1880) reports sixty cases of "quinine poisoning." He also found that small doses caused the erythema, but all his cases, except one, were either children or women, the exception being a man, who did not exfoliate.

I would especially call attention to the following points in this case: The age and sex, the completeness of the exfoliation, the severe mental symptoms, the intensity of the pruritus, and, lastly, the small dose. I should advise a constant inquiry for such idiosyncrasies, as the poisoning is as liable to occur from small as from large quantities of the drug, and I wish to recommend a weak solution of carbolic acid for the itching, as it was most effective.

DISCUSSION.

Dr. McLaughlin said the specimen was interesting and instructive. Quinine is so universally used that it is wise to call attention to the untoward effects which occasionally follow. In this case the type of disease was erythematous, but vesicles, wheals, bullæ, and other skin manifestations were sometimes seen. Several theories have been advanced to explain the development of these rashes. Quinine, by its irritating effect upon the gastric mucous membrane, stimulates the sensory nerves, and by reflex action produces a dilatation of the cutaneous vessels. Again, as quinine is eliminated by the sweat glands, a local irritation through these channels is excited.

Untoward effects were frequently exhibited by workers in quinine, and the eruption has followed the local application of hair tonics containing the drug. The effect was due to an idiosyncrasy, as from the use of opium, mercury and other drugs.

About ten years ago he had reported a case in which a rapid exfoliation of the skin followed the ingestion of a drachm of compound tincture of cinchona. Several similar cases had recently been reported in a medical periodical. The physician should always bear in mind the possibility of idiosyncrasy, and he should make inquiries before prescribing quinine, opium, arsenic and other drugs which were known to produce such peculiar effects in some individuals. Morrow has called attention to the possibility of some eruptive fevers, supposed to have occurred a second time, having been due, perhaps, to this drug.

Dr. Magruder said that the specimen was instructive because it directed attention to the evil effects which follow the administration of quinine in some cases. The physician should be on the alert for idiosyncrasy. Here, the patient not only lost time from his work, but the results were very serious. Dr. Magruder had more than once avoided making an awkward mistake by questioning the patient indirectly in order to ascertain whether an idiosyncrasy existed. In one case the ingestion of two doses of two grains each of a salt cinchona had been followed in two hours by a marked general edema which lasted for several days. Later in the same year he forgot the incident and ordered the drug for the same patient a second time with similar results; in addition there was intense itching but no desquamation.

Dr. T. C. Smith said that Dr. Erbach had reported a case of exfoliative dermatitis, some years ago, somewhat similar to Dr. Reisinger's, which was thought to have been due to scarlet fever. He inquired whether it might not have been due to the ingestion of quinine.

Medical Miscellany.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION will hold its twelfth annual meeting September 2nd, 3rd and 4th, 1902, at Hotel Kaaterskill, Catskill Mountains, New York. Scientific papers are already promised of the usual absorbing interest, while the social features arranged are quite unusual in character and pleasure, including local excursions, concerts, balls, banquet and parlor entertainments.

REPORT OF THE HARVARD UNIVERSITY CANCER COMMISSION, in the American Journal of the Medical Sciences, June, 1902.

The aim of this commission has been to investigate the various theories regarding the etiology of carcinoma. The contention made by some that parasites cause cancer cannot be sustained. Tyzzer found that the lesions produced in the livers of rabbits by coccidium oviforme consisted of small yellow or white nodules sometimes of a cystic nature and sometimes firm. Into these cysts or nodules papillae project, covered with epithelium. Often very little epithelium exists. The infection takes place through the stomach by the ingestion of a capsulated form, the oöcyte, from which active parasites develop. The cycle of development is conventional to other parasites. As the result of this parasitic invasion degeneration of the biliary epithelium occurs which is followed by a low grade connective tissue, inflammation pushing its product into the bile ducts and subsequently causing epithelial proliferation where the biliary lining was broken. No metastasis occurs. The histological picture is one of chronic inflammation.

White describes histology and reviews literature regarding the skin lesions said to be produced by the protozoan molluscum contagium. The nodule which resembles a malignant growth consists of hyperplastic rete cells which push upwards forming a globular mass. The cells vary in regard to possessing nuclei and nucleoli and in regard to staining qualities. Mitosis occurs. The process represents the gradual change of the rete mucosum and the formation of hyalin.

Robey found no constant organism in these lesions with the exception of the staphylococcus epidermidis albus of Welch. Inoculation with this organism produced the usual staphylococcus inflammation.

Richardson makes extensive examinations of fresh cancerous material secured at the Mass. General Hospital and concludes that a specific infective organism does not exist.

Weiss studied four torulae (blastomycetes) two of which have been isolated from cancer. His work consisted mainly in classifying the fungi and determining their mortphological and physiological characteristics.

With negative results in a large number of cases, Greenough examined various tissues with the view of finding cancerous bodies. In 11 non-malignant cases which he examined there was no epithelial proliferation beyond the basement membrane, and in these he found typical cell inclusions like those seen in cancerous bodies. Greenough believes they do not arise from nuclear degenration, but that they are more closely related to the process of secretion, because of their occurrence in glandular carcinoma and not in the epitheliomas. There is no reason for thinking that these bodies are of parasitic origin.

Nichols, from an exhaustive study of blastomycetes and their association to carcinoma does not think that the assertions of Plimmer and Sanfelice are true. These latter men maintain that blastomycetes produce a nodule identical with the cancerous body. These parasites are not constantly present in cancerous tissue, therefore cannot be the etiological factor.

UTERINE CANCER. Polak, New York Medical Journal, July 19, 1902. The writer insists on the advisabliity and possibility of an early diagnosis. The character of the earliest symptoms depends upon the time of the onset of the disease, i. e. during menstrual life or at the menopause. In the former, compare every bleeding with what it has been in the same woman. Regard intermenstrual spotting or serous discharge as suspicious. When hemorrhage occurs at the menopause it is very significant.

Every woman over fifty who presents evidences of menstrual vagaries or leukorrheal discharge should be carefully examined.

Radical operations should be limited to those cases in which the disease is limited to the uterine tissues.

M. H. Richardson, Boston Medical and Surgical Journal, July 24. The author answers many questions relating to this important subject. He says recovery can only be expected from an operation when the disease is limited to the uterine tissues. When it is not reasonable to expect a recovery, and when the procedure is likely to aggravate the general condition of the patient, it is neither advisable nor justifiable to operate.

The writer uses the vaginal, and the combined vaginal and abdominal operation, the choice depending upon the circumstances. Special precautions should be taken not to injure the bladder and the rectum. Uremia, exhaustion and embolism are complications.

E. L. Burrage, Boston Medical and Surgical Journal.

At the conclusion of his paper, Burrage states that about 5% of cases operated on are well 5 years after the operation. The results of operations on the uterus are more favorable than those upon the cervix.

In the early cases when the condition of the patient is good and the disease is limited to the uterus the best operation is the abdominal operation of Werder, because when operating in this way it is possible to ascertain the condition of ovaries, tubes and broad ligaments, and the danger from metastasis is less.

When the disease is far advanced vaginal hysterectomy currettage and the cautery are recommended.

W. M. Conant, Boston M. and S. Juornal, July 24.

Four possible results are to be expected if a radical operation is to be done.

1. A cure. 2. A relief from present suffering, from hemorrhages and from foul vaginal discharges. 3. A condition that in some respects is worse, because of the disease. 4. Seems to spread more rapidly after the operation. 5. Death.

CÆSARIAN SECTION, by Abram Brothers, in the Medical Record. Six cases, in which the following indications presented, are cited:

1. Pelvis slightly contracted, head impacted at brim. At patient's request further conception rendered impossible by hysterectomy. Mother and child well.

2. Marked scoliosis of the vertebrae in the lower dorsal and upper lumbar regions in a dwarf. In labor the head lay across the pelvic brim with a hand and arm alongside it. Engagement did not ensue. Hysterectomy performed to prevent further conception. Mother and child both well.

3. Six of the children had perished from dystocia in previous labors. In the present case forceps used without avail. Woman in profound shock. Cervix dilated, head impacted. Child dead. Craniotomy was performed; subsequently a Porro operation, as foetus could not be extracted. Patient recovered.

4. Primpara, with oblique pelvic contraction due to hip joint disease and rickets in childhood. At the time of labor hysterectomy was done after child had been removed to prevent further conception. Mother and child survived.

5. On examination patient presents evidences of general dropsy, accentuation of the second sound of the heart, and arterial pressure increased. Sight defective; albumen in urine abundant. Patient a primpara, eight months pregnant, who gave history of having had scarlet fever and uric acid diathesis. Labor brought on by dilating cervix and passing bougies. Eclampsia followed. Caesarian section performed, but mother and child die.

Primipara, in later months of pregnancy, suffers from melancholia.

6. Pelvis somewhat contracted, child large. Breech presents and expulsive powers feeble. Caesarian section saved both mother and child. (E. P. Davis.)

7. A case in which a fibroid of the cervix complicated pregnancy. Cæsarian section was followed by a hysterectomy. Cord and uterine contents had undergone decomposition and the intestins had been exposd by the spontaneous opening of the wound sometime later. Woman recovered. The desirability of resorting to the combined operation in cases of sepsis preceding delivery (where Cæsarian section is required) is here brought out.

DRAINAGE AFTER ABDOMINAL OPERATIONS. Under this title Dr. H. L. Hibbard (Kansas City Medical Index-Lancet), wrote his last article. He discussed the history of abdominal surgery and the progress of drainage in laparotomies. A recapitulation of his paper follows:

1. The present, most scientific use of drainage is a stage in a gradual process of development.

2. As recently as fifteen years ago there was good authority for using drainage, after any abdominal operation.

3. Drainage will never be eliminated from abdominal surgery.

4. Its purpose is to provide for the removal of pus, when present or probable, or other fluids, such as urine faeces or bile, in case of injury, and as part of methods of hemostasis.

5. Its disadvantages are increased liability to secondary infection, hernia, more frequent disturbance, pain, delayed healing and various accidents.

6. Peritoneal abscesses should be drained.

7. Drainage should be abandoned in clean operations and clean removal of pus sacks, and where possible as an adjunct to hemostasis.

8. It should probably be used freely in general peritonitis.

9. Drainage through the vagina should be substituted for abdominal drainage where practicable.

10. Soft material, usually iodoform gauze, is preferable to tubular drainage in the abdomen.

11. A drain in the abdominal cavity always requires the constant, watchful supervision of the surgeon, and preferably the one who placed it there.

PROSTATIC SURGERY. Bransford Lewis, in Journal of Cutaneous and Genito-Urinary Diseases. July, 1902.

The writer reviews the various methods of operating for the removal of enlarged prostate and gives points which may be of value in deciding upon a procedure.

The suprapubic route is to be chosen: 1. In extreme enlargement when the middle and lateral lobes project intravesically. 2. In marked pedunculation of the intravesicular tumors with absence of obstruction from other sources. The perineal route is preferable; 1. In general hypertrophy without extreme intravesicular projection. 2. Marked compression of the urethra between the enlarged lateral lobes. 3. When the development of the bland is in the direction of the rectum. 4. In cases where the patient is in good general condition and there is no special indication for the employment of some other method.

The Bottini method is indicated: 1. In cases of extreme debility. 2. Cases of bar or median sessile obstruction of not too great dimensions. 3. Collar formation (incomplete.) 4. A prophylaxis (Horwitz) in early catheter life.

Suprapubic cystotomy with drainage is recommended at times, not as a cure for prostatic enlargement, but as a preliminary step to one of the above procedures. It can be done by means of local anesthesia and with the addition of but little danger to the patient. As a substitute for this latter operation the author favors an even milder course which he pursued in two instances. Suprapubic puncture with trocar and canula;; withdrawal of trocar, insertion of a soft rubber catheter into bladder and subsequent removal of canula. Catheter is held in place by safety pins and proper bandages. One case was thus treated for ten days and with good results.

G. Frank Lydston, Philadelphia Medical Journal. August. 1902.

The author calls attention to the fact that the disease is not alone a senile affection, but is due to conditions which operate in middle life as well. These conditions may be removed or inhibited if an early diagnosis is made, and the disease be subjected to methodical treatment. Sounds, astringent antiseptic and alterative applications, are used to remove the irritative condition in the neck of the bladder in the male. Another indication is to deplete the prostate and surrounding tissues and to stimulate the absorption of inflammatory exudates by means of massage. If these palliative measures do not suffice, then the patient must choose between catheter life and a radical operation. The writer favors prostatectomy by the perinal route. He does not sanction Bonnini's method. Finally, he deprecates delay in operating, as it brings complications which must be met.

The denudation of the thyroid gland as practiced by Jaboulay for goiter, was so successful as to lead this surgeon to attempt the same treatment for hypertrophy of the prostate. In one patient suffering from a decided enlargement of this gland a semi-circular incision was made in front of the rectum, extending to the posterior surface of the gland and drained with aseptic gauze for twelve days.

In a month the gland was scarcely to be felt and micturation was not difficult. Two other patients. treated in the same manner did not show such favorable results.

PROSTATIC HYPERTROPHY, by Chetwood, in the New York Medical Journal.

There is a growing tendency to the early adoption of operative measures in the treatment of prostatic enlargements. Palliation is likely to incur infection of the bladder and kidney. The route chosen in prostatectomy is to be determined by the character of the tumor, but in most cases the perineal operation is advisable.

W. T. Belfied was the first surgeon to use the galvano cautery to remove an enlarged prostate through the perineum. Since then the author has used the galvanocaustic incisions with uniform success. The steps in the operation consist in opening the urethra upon a grooved staff. Through this opening digital exploration of the bladder is made and the nature and extent of the growth determined. Usually, the obstruction is due to the "obstruction of the middle lobe, which blocks the orifice by intravesicular and urethral hypertrophy of the two lateral lobes, which elevate a median fold of mucous membrane and flatten the vesical orifice, or, by intra urethrae prostatic nodules." The number of galvanocaustic incisions made depends upon the character of the tumor, three often being necessary.

ASSOCIATION OF GRAVES DISEASE WITH GLYCOSURIA, by Heinrich in the Medical News.

The following experimental work and clinical observation was made in this connection. Into the stomachs of a series of patients suffering from Graves disease, 75 grammes of pure glucose were introduced. In only one of the cases did sugar appear in the urine, and in this case only 3½ grammes were excreted.

The writer has seen spontaneous glycosuria occur in Graves disease, and he is inclined to think that it is not an impossible combination, and is not the result of mere accident. These conditions may be considered neuroses, caused by disturbances of the nervous system or of the thyroid gland. The thyroid does not appear to be the causal factor in diabetes, since its removal does not produce glycosuria. Disturbed thyroid function, however, may account for the disease by liberating a ferment which upsets sugar metabolism.

Twenty-four cases of this disease combination are recorded. Of these only two were males. There seems to be a relation to the menapause.

SMALLPOX.

Drs. Hare, Shoemaker, Tyson, Henry and Anders, all medical experts of Philadelphia. were appointed as a commission to investigate the public safety of that city relative to the smallpox plague. The commission reported that there was only one way of avoiding smallpox, and that was bu successful vaccination. They cite two facts which thy think prove beyond a doubt the truth of the above assertion. Previous to vaccination Germany was one of the countries in which smallpox was rife. Now it is almost unknown. The government insists upon vaccinating every member of every household, and upon doing it thoroughly, and also demands revaccination. Another fact brought out by Dr. Welch, who has charge of the smallpox hospital in Philadelphia, is that during the present epidemic in that city no one has been admitted to that hospital who had been recently successfully vaccinated.

The commission also states that there is no medicine that can be administered which will avert the disease. The report touches upon the dangers attending vaccination, and says they are not more than a pin scratch, when the operation is properly done. The cases of lockjaw reported to have followed the operation are thought to be due to subsequent infection and not to a contaminated virus.

THE DANGER OF EPIDEMICS. George Soper, in American Journal of the Medical Sciences. In this paper Soper discusses the danger of epidemics following floods. He thinks that there is no danger to be feared from the bodies of previously healthy men and animals killed by violence. Therefore he considers the most important danger exists in the liability of the survivors to sickness.

The general sanitary officer of the state, or the U. S. Marine Service, should take charge and see that all debris is removed and a condition of cleanliness secured. Disinfection of the bodies is advised and deep burial. For dead animals and all sorts of refuse, burning is advised, a thing which can be accomplished by sprinkling resin over the matter and piling wood upon it.

BACILLUS COLI COMMUNIS IN INFECTIONS, by L. Faugres Bishop, in the Medical News.

The importance of this organism in acute inflammatory conditions has been generally overestimated. It has a wide distribution in the normal body, and is usually a saprophyte. The invasion of healthy viscera by this bacillus takes place from the intestines, probably by means of the portal circulation or by direct penetration of the intestinal wall. Invasion in this manner is very common during agonal or postmortem periods. The organism becomes a factor in inflammation as a rule after the field has been prepared by the action of other bacteria. The virulence of this organism is influenced by the physiological action of the intestines and by the environments in its new host. Usually it is a pus-producing micro-organism.

UNITED STATES INDIAN EXHIBIT. World's Fair, St. Louis. Aug. 18.—Much genuine sentiment is centered in the Indian Bureau's preparations for an exhibit at the coming World's Fair of the representatives of the tribes of American Indians. That the congress of real red men at St. Louis in 1904 will be the largest and most comprehensive Indian exhibit ever attempted, and that it will be the last exhibit of the kind the United States government will attempt to make on a large scale, seems to be generally understood at Washington. It is, therefore, the intention of the Indian Bureau, to make it as complete as possible, and it has therefore been planned on elaborate foundations.

The exhibit will be representative of the various types of this country's original inhabitants. It will be independent of the other government exhibits, and will be enclosed in a stockade, as many of the Indians placed on exhibition are government prisoners, and will be constantly guarded. The noted Apache chief, Geronimo, now more than 70 years of age, who will be at St. Louis, is never permitted to leave his reservation except under guard. There will be Indian villages presenting Indian customs and mode of living, as well as the various Indian dances, snake dances, dog feasts, and other incantations in which the Indians appear in their gaudily decorated and fantastic garbs will be presented more actively and effectively than has been attempted off the reservation. There will also be sham battle and other exhibitions bearing a resemblance to the experiences of the early frontiersman, including the council of war, the massacre and the pipe of peace.

An official of the Indian Bureau says of the exhibit: "The appropriation of $40,000 for the Indian exhibit will be expended under the direction of the Secretary of the Interior. Mr. Hitchcock is anxious that the exhibit be made one of the distinctive features of the World's Fair. There will be at least 1,000 Indians, representatives of over fifty tribes, grouped on the Exposition grounds. Some of them will be the uncivilized, while others will be from those who have been educated and are in every respect equipped for citizenship. They will live in tepees, in camps, on the Exposition grounds, and will be inspected with much interest by visitors. The several Indian reservations in New York State will contribute their share."

A PAIR OF THEM. A man, while bicycling in southern France, was obliged to dismount and push the machine up a steep hill. On the way he overtook a peasant with a donkey and cart. The animal was putting forth its best efforts, but it advanced slowly.

The benevolent cyclist, putting his left hand against the back of the cart and guiding his machine with the other hand, pushed so hard that the donkey, taking fresh courage, pulled his load successfully up to the top.

When the summit was reached the peasant burst into thanks to his benefactor.

"It was good of you, indeed, monsieur!" he protested. "I should never in the world have got up the hill with only one donkey." —Journal Junior.

THE CLIFF DWELLERS. The ruins of the former homes of cliff dwellers in Northern Arizona will be visited by a party of St. Louis and Washington scientists who propose to dig for specimens to be taken to the World's Fair in 1904. Arrangements are also under way for a collection of specimens from the petrified forests of Northern Arizona, also to be a part of Arizona's exhibit at the Exposition. The Arizona World's Fair Commission has applied to Washington for permission to take from the reserve such specimens as may be satisfactory and will give a proper idea of the beauty and value of these petrified trees.

Dr. George H. Simmons, secretary of the American Medical Association and editor of its journal, is said to be making a rapid recovery. Dr. Simmons was operated upon recently for gall stones.

MEDICAL DIAL

A Monthly Record of Medicine and Surgery

Published by MEDICAL DIAL COMPANY

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Medical contributions respectfully solicited from Regular Physicians. The editor or publishers will not be responsible for the opinions expressed by correspondents. No attention paid to anonymous communications. Reprints furnished only at actual cost.

Entered in the Post Office at Minneapolis, Minnesota, as Second Class Matter.

SUBSCRIPTION PRICE

United States, Canada and Mexico, per annum, in advance, - - - - - - - - - - - - - - $1.00
Foreign Countries in the Postal Union, per annum, in advance, - - - - - - - - - - - - - 1.50

N. B. Matter for the reading pages should reach office of publication on the 20th of the preceding month and display advertising on the 25th, to insure attention.

Vol. IV MINNEAPOLIS, MINN., OCTOBER, 1902 No. 10

RUDOLPH VIRCHOW. Prof. Rudolph Virchow, of Berlin, the eminent scientist, statesman and philanthropist, died on the 5th of September, aged 81 years. He was the son of a small shopkeeper and farmer, and was born in the Pomeranian village of Schrivelbein.

He had a fall from a street car last January and fractured the neck of the femur, which did not unite. He spent the summer in Bohemia, away from Berlin, and later in the Harz mountains, but returned to Berlin only the last Sunday before his death. He was an honorary citizen of Berlin, and the municipality gave his remains a public funeral.

Prof. Virchow attended the Volkschule of his native town until 13 years of age, and then entered the gymnasium at Koslin. At the age of 17 he began the study of medicine at the University of Berlin, where five years later he received his medical degree, in 1843, and was appointed assistant physician at the Charite. His finances were limited during his course at the university, and he enrolled himself in the Repiniere, among those who, in return for free instruction, bound themselves to serve the state for a definite period after graduation. Hemholtz was aso one of the same class. At the age of 25 he became the head of the Charite, succeeding Froriep, and the next year, 1847, he was appointed extraordinary professor at the University of Berlin. He had already founded the Archiv (full title is Archiv, für pathologische Anatomie und Physiologie und Klinische Medicin) in 1848. Prof. Virchow was appointed a member of the government commission to investigate the epidemic of typhus fever among the inhabitants of the Silesian highlands. His report was regarded both brilliant and profound. It brought him into prominence as a scientist and politician, as he attributed the ravages of the disease to the faulty government of the province and charged his Majesty of Prussia with the sins of omission. Thus introduced into politics, his conspicuous career in parliament followed, and he always espoused the cause of the people—but the radical views which he held, and did not conceal caused his expulsion from his chair at the Berlin university in 1849. He immediately accepted an offer of a professorship at the University of Würzburg, and there did some of his best scientific work. During the seven years he remained at Würzburg he began his celebrated work "Cellular Pathology," which was published in 1858, also the "Hand-book of Special Pathology and Therapeutics," and he also instituted his "Annual Reports of Advances in Medicine Throughout the World." His connection with this college, aided by other brilliant young men raised it to the front rank of medical schools.

In 1856 he was recalled to Berlin by the Prussian government and placed at the head of the Pathological institute which it had established. In 1857 he published his first work upon anthropology, the "Investigations Upon the Development of the Cranium." He instituted the work of measuring the heads of children and adults in all the countries of Europe, collecting statistics as to the color of hair, eyes, and other race data. In 1859 he was elected by the Liberals amember of the municipal council of Berlin, and entered the house of deputies in 1862, and was a member of the Reichstag from 1880 to 1893. He is the author of the term Kulturkampf designating the war of the state against the church. He was watchful of the liberty of the people, and in 1863 he carried an address which arraigned the Prussian ministry as violators of the constitution, and in 1865 aided in defeating the government in its attempt to create a navy. In this debate he aroused the Count Bismarck so that he was challenged by the Count for a duel. How the matter was settled does not appear; probably they concluded to call it a draw without drawing any weapons or blood.

Prof. Virchow was a friend of Schliemann, the archaeologist and assisted and encouraged him in his discoveries. He kept up his studies in medicine while interested and working in many other investigations. He was slow to accept the microparasitic theory of disease, but when finally convinced of its truth, and that bacteria play a large part in the production of disease, he modified his own teachings to agree with it.

It is well known to be a much harder task in the old country for a man without wealth or influential friends to rise rapidly to eminence in any profession than in these United States; but Virchow by his natural ability and great industry early forged his way to the front rank, and maintained his position there to the end of a long life.

FOREWARNED — FOREARMED.

"In time of peace prepare for war."

In an interval of freedom from an epidemic of smallpox is the time to avoid an outbreak by the use of all the known means of prevention. Dr. Hall, the health physician of the city, has requested the school board to re-establish the order concerning the vaccination of children before admission to the schools, said order having been suspended for a season. No more reasonable and proper suggestion could be made, and none more in accordance with justice and common sense; injustice to those liable to contagion, and in line with common sense as recognized by competent medical advice. Let the rule be established and permanently remain for the safety and benefit of all the children and adult population of Minneapolis, and the strangers who may come within her gates.

According to the Nogal (N. M.) Republican, the town of Nogal is in need of a physician.

The President's physician, Dr. George A. Lung, surgeon United States Navy, has been ordered to succeed Dr. John F. Urie as surgeon to the President. Dr. Urie has been made assistant chief of the Bureau of Medicine and Surgery. Dr. Lung, the present physician to the President is a New Yorker and entered the naval service in 1888. During the President's tour through the Northwest he will be attended by his regular physician, assisted by Dr. B. J. Richardson, a throat specialist.

The Licensing of Prostitution. Dr. E. Benjamin Andrews, of University of Nebraska, in a lecture delivered recently in Chicago, advocating the licensing of the social evil. He defended the methods in vogue in Paris and elsewhere on the ground that it was the State's duty to protect the innocent women and children and future generations.

Medical Articles.

OPENING ADDRESS. Delivered at the Amphitheater of Hamline University Medical department, Minneapolis, Wednesday evening, September 17, 1902, before the medical faculty and matriculated students of the Twentieth school year, by I. C. J. Wiig, M. D., of Minneapolis.

Ladies and Gentlemen: Again the doors of our Alma Mater have been thrown open to the people. For the twentieth time in her history her halls and galleries are once more illuminated. Truly the college of P. & S. is a mother of many children. With the sincerest affection that ever arose from a mother's bosom, I tender you all, on behalf of the facuty, a most hearty welcome.

The coming school year stands before you as a bright and happy one. It promises to be the most prosperous and successful in the history of the school. Tonight you stand at the threshold of another year's toil and labor. You engage in new studies, and you assume new duties towards yourselves, your instructors and the world at large. You are now fitting yourselves for a profession which is by no means easy to fill. You will have to deal with life and death. No wonder, then, that the public will demand of you a steady hand, a cool head and a kind heart. Nay, more than this; they will expect you to be men and women above moral reproach. Thus you will readily see there is a double life to your coming vocation. On the one hand, medical art and skill; on the other, the exalted qualities of unblemished manhood and womanhood.

Your mental horizon will become enlarged, and a new world of knowledge will be unveiled as you continue and progress in the work. Ready hands stand anxious to show you the way, and to make plain the many perplexing problems you will encounter, but, in order to obtain the full benefit of your teachers' efforts you yourselves have a very important part to act. You must be inspired in all your labor by the "I can" and "I will" spirit. If you are not actuated by this motive you are not doing your duty to yourselves, your profession, nor the community; you are not pulling your share of the load. Let me assure you of one fact, there is no such thing as having a "soft snap," "a graft," or anything of that sort in a medical course. The study of medicine is made up of facts, not fiction; it is prosy, not poetical; yet our united thought and labor will in due season bring flowers and fruits.

Look abroad and see those who have made a success of their medical practice! Have they been lying back on downy cushions, sipping the golden fluid, with scarcely an effort on their part? No, they have been men and women of noble principles and uncorrupted character, who, with brain and hand, have brought their business to a high professional standard.

I believe the world is better today than it ever was. I believe the refinements of modern society, its intellectual culture, its conceptions of the true and beautiful are glorious evidences of our advancement toward a higher plane of existence. We are no longer on the border of civilization; no one can say we are still in the infancy of our educational development. "The Star of the North" is a brighter gem in the galaxy of states than it ever was before. Our citizens are better, purer and nobler than they have been in the past. I believe that the educational and moral sentiment of the people is stronger, and is making grander strides toward elevating the masses than ever before.

Look around you and behold the superb churches of today, with the glorious harmony of choral music, their great pipe organs, their violins and cornets, their grand sermons, full of Heaven's balm for aching hearts; are not these expressions of the highest moral standard that has ever dawned upon the earth? We are slowly, but steadily, nearing that sublime state of perfection with which our parents of old were blest, that angelic condition when Eve was dressed in sunshine and Adam clad in climate.

After the completion of your course you will cast your lot with people of refinement and culture, whose lives are governed by the dictates of right and wrong. Remember that the highest order of learning, the greatest amount of skill, will not alone make you an honor to the medical fraternity. There is no profession from the members of which greater purity of character and a higher scale of moral excellence are required than the medical; and to attain such eminence is a duty which you as students, and we as physicians owe alike to our patients and our profession.

This institution is not a preparatory one. Your course is final, fitting you for your life's vocation, relieving the sick and healing the wounded. Could you name me a calling more divine, or a duty more sacred? May its responsibilities from this day onward stand out in bold relief on your mental horizon, and be a powerful incentive to hard, earnest work. Permit no other pursuit to engage your serious attention while you are delving into the science of medicine. Surely it is too precious to be considered a side issue, a sort of second-hand affair. Let me assure you there is not one thing in life, and within range of possibility, which you cannot accomplish if you have a supreme purpose, a definite aim, and will bend all your energies, will-power and belief solely toward its realization. By the concentration of your mental forces and the wise use of your vital energy, having a fixed aim that is not disturbed by difficulties, a zeal that is broad and deep, and a faith that no storm of adversity can change, you will arouse within you the latent powers which will transform difficulties and make of the obstacles you encounter but stepping stones to higher purposes and greater achievements.

The family physician is the confidante of the household; the aches and pains of the human heart are made known to him; he hears it all, and as a true physician he keeps it all. Do you wonder, then, that the wives and daughters of our country demand purity of character from the medical men of today? Will they trust or employ a physician who associates in the slums, or a surgeon who spends his leisure hours at the bar? How much reliance would you place in one who is the captain of a baseball team, or at the head of a gun club, or one who in the midst of midnight cheers carries off the jackpot? What would you think of a physician who enters the sick chamber with his smoking cigar, and at the same time perfumes the atmosphere with his breath of spiritus frumenti, entering and departing without the slightest word of greeting? Will you credit a man with deserved distinction and true professional integrity who presumably, in order to bring his name before the unsophisticated will fill columns of the public press with fanciful narratives of some. common-place surgical operation at home, or of some trifling incidents from his journeys and voyages abroad? Yet, one will not have to search far and wide to find examples of this kind; I regret to say that even the city of Minneapolis, great and glorious as it may be, can produce some of these. Their acquirements, however, are in proportion to their conduct and capacity. .

The great loadstone which attracts the finer essence of our being and shapes it into the stately structure of the physical body, is virtue; it is the talisman of the adept; the key note of magical power, the unscarred purity of one's heart. Virtue and character go hand in hand on the ladder of attainment. Character is the entity of man's being, the one imperishable substance gathered from the wrecks of life's experiences. The good that lives in the heart of man is character; it is the mind's most precious crown, whose jewels have been wrought out of years of study and toil and sorrow and pain. If you fail to create it out of your days of earthly career, you fail to fulfill the design of your existence. It is the object and end of nature in man. You may express it as a fourfold quality; viz.—right feeling, right thinking, right speaking and right acting. Character unites these four cardinal attributes, and it causes the eminent powers of the different planes of activity to merge into a complete unity of harmonic expressions. The formation of these qualites in their highest and noblest sense is a part of a student's life. The whole current of your life must be charged with the magnetic energy of great and lofty aims; and by hard and persistent work, concentrating all the activities of body and mind in the effort to achieve the thing desired, being thorough and honest, enthusiastic, conscientious, and kind, having faith in your natural abilities and innate power, there is no task too difficult, and no environment so fraught with obstacles which you may not conquer. Self-reliance, with courage and zeal, determination and constant endeavor, combined with high ideals are the costly charms which have brought men to the front in every age. We must dare to liberate ourselves from accustomed habits which are detrimental to a wholesome and temperate life; from associations which have a degrading influence; in fact, from everything that would prevent us from acting according to our highest conception of truth. Let your bosom be filled with a firm resolution to do that which you recognize as most essential to the highest attainment. He who has learned to know, to will and to dare, is upon the right path to success. Cast off the worries about innumerable little things which come up in daily life to oppose your plans and purposes. If you are haunted by fear of failure, if you lack confidence to attain the results you seek, it is because you have not yet awakened to a full knowledge of your rightful inheritance. You are still tossed about on the current of superficial existence and imperfect apprehension. If your mind wanders, if you doubt and hesitate when met by counteractive influences, if you lack faith and persistency, you will continue to drift with the tide of circumstances, discouraged and helpless on life's surging sea, like a storm-tossed mariner without chart or compass to guide him.

Resolve, then, to persevere in the cultivation of all that is noble and true. Be active and energetic and direct all your forces to a full development of mind and a steadfast growth of character, forgetting not the privileges of others, but in all your conduct be honest and sincere in your dealings with man. Let your watchword be "Onward" and "Upward," "Rowing, not Drifting," keeping your eyes fixed on the final goal, and with uplifted, eager hands, continue to tread the path which leads to the heights of your ambition; and be assured that the time will come when that mysterious force within you which now causes the heart to beat with infinite longings, will not be silenced until you have received response to every yearning and realized a fulfillment of every hope.

Ladies and Gentlemen: One of the most excellent achievements which this institution has accomplished is the establishment of those strong and sacred ties of friendship which exist between teachers and students. These bonds of fellowship increase our love and devotion for our common cause. I believe in the brotherhood of mankind and the nearer we approach it the nearer we come to universal peace and boundless happiness; for the fruit of peace is happiness and happiness is the ultimate object of human thought and human labor.

Again I bid you welcome and greet you one and all with the hope that every hour that we spend together will be crowned with pleasures and praise, which will ripen at length into precious memories of the past. May you all be an honor to yourselves and a credit to the school, and as such, your work will be links of steel to bind you and your Alma Mater together in bonds of inseparable friendship and brotherhood forever.

ANATOMIC AND PHYSIOLOGIC REST IN THE TREATMENT OF ACUTE INFLAMMATORY ABDOMINAL DISEASE. Byron Robinson, B. S. M. D., Chicago.

More than twelve years ago I learned the great secret of success in abdominal surgery by becoming a pupil of Lawson Tait, the greatest surgical genius of his age.

Mr. Tait did not secure his success from so called antiseptic surgery, nor from even present methods of aseptic surgery, for I have watched him do successful abdominal sections on returning from his yachting expeditions where he delighted to be his own cook with anything but aseptic hands and by washing them in soap and water two minutes or less was ready to do the section.

Tait's success lay in anatomic and physiologic rest with thorough drainage of the tractus intestinalis. He used to remark to his four pupils that the patient should have the bowels so thoroughly evacuated that the intestines were like slipping ribbons when the abdomen was opened. Now when the intestines are contracted to the shape of slipping ribbons they are in a state of physiologic rest. Besides, Tait kept the bowels in a state of physiologic rest by allowing no fluid or food per mouth for 48 hours—a cruel method—after the section. Practically, the patient was without food for five days so far as any action on the bowels was concerned.

Anatomic rest was secured by rest in bed—quiet bones and muscles. On the third day Mr. Tait again drained the tractus intestinalis with magnesium sulphate and mild chloride. This gave the bowels another physiologic rest. For some twelve years I have been following the method of anatomic and physiologic rest in the non-inflammatory and inflammatory diseases of the abdomen. I am induced to write this on account of the slight attention paid to the subject of anatomic and physiological rest by so many general practitioners and general surgeons.

First and foremost, the most striking success in anatomic and physiologic rest is shown in abortions. Even as short a time as ten years ago it was the general treatment in septic abortions to curette vigorously, irrigate and pack the uterus immediately on arrival at the hospital and follow this by vigorous catharsis. I learned fifteen years ago from a considerable practice in gynecology and obstetrics that it was a very fatal practice. In fact, when at that time I saw a case of abortion with temperature 105 degrees, pulse 130 and severe tympanitis, I generally considered the prognosis was fatal with the then active treatment. For the past dozen years in abortion cases I have assumed the treatment that I learned from Lawson Tait, that of anatomic and physiologic rest when the abortion patient comes to the hospital, septic, with a temperature of 105, pulse 120 to 140 with severe tympanites she is placed on her back in bed, she is not allowed to get up for stool or urination (anatomic rest). No food or fluid is allowed per mouth, she is given hypodermic of morphine for pain, and warm normal salt solution is injected into the rectum to abate thirst. Her friends fight against this as cruel and unusual punishment, but the hospital soon gets control of the patients by the parting of the friends. It is astonishing what a day and a night's anatomic and physiologic rest will do for a septic aborted patient. She soon becomes easier under the rest. The small doses of opium aids to check the pain which is wild peristalsis. The tympanites subsides. In a few days one finds the peritoneal exudate still there, but in a couple of weeks if abscess formation does not occur they begin to subside. Put the intestines at rest and they will not distribute the sepsis over the abdominal cavity by wild and irregular peristalsis. Under anatomic and physiologic rest seldom does one lose an abortion patient. In the second ten years of my practice I have saved double the number of septic abortions by means of anatomic and physiologic rest.

I am aware of no septic infectious process where the anatomic and physiologic rest method will demonstrate its utility as well as in septic abortions. Again, for about ten years an able surgeon whom I would meet almost daily has tried to convince me that hot, moist compresses saved him from amputating many limbs. Hot, moist compresses with him are a hobby and I must admit that he saves many terribly septic limbs and fingers. However, I think this good surgeon has mistaken hot, moist compresses for anatomic and physiologic rest. When a septic limb is put to anatomic rest, the bone is immobile. The muscles lie quietly, no contractions and relaxations impel or force the lymph stream proximalward carrying sepsis. The blood stream is physiologically quiet. In short, the sepsis in the infected limb is being circumscribed by anatomic and physiologic rest, and not by the hot, moist dressings. Besides he also claimed that the hot, moist dressings must be antiseptic as bichloride of mercury or alcohol. I have argued with this surgeon that it was the anatomic and physiologic rest that produced the good effect in the cases which he thought was hot moist dressings.

In appendicitis, the most treacherous and dangerous abdominal disease, anatomic and physiologic rest is equally good but it fails in some cases where the sepsis has been too widely distributed by enteronic peristalsis and therefore many of my colleagues condemn it. This is an error for no one treatment will save all cases of appendicitis. For example, I find much opposition among physicians in consultation in regard to giving no cathartic in an acute attack of appendicitis. I argue with them that a cathartic in a case of acute appendicitis is about the worst form of malpractice. It makes the appendicitis worse by distributing the sepsis through increased peristalsis and increasing the pain while it gives the patient no relief. Such a practitioner mistakes the result of the disease for the disease itself. What the appendicitis patient needs is anatomic and physiologic rest, no food, no fluid per mouth but rectal injections and opium if necessary to control pain until when? Until recovery, or until he is ready for an operation, in a stage as quiescent as possible. During twenty years of practice I have been infected in the fingers and about ten times during surgical operations or autopsies. If I worked with the hand with the septic finger all day at night it was worse, it throbbed, ached and became swollen. With a night's anatomic and physiologic rest it was better in the morning. If I would place the hand in a sling (anatomic and physiologic rest) during the day it would still continue to improve. Besides we can save large numbers of patients from dangerous and unsatisfactory operations by anatomic and physiologic rest. They can be bridged so that operations will not be required during local and general sepsis.

The great principles gained by anatomic and physiologic rest are; 1. The lymph stream is slowed, the muscular action required to force it with the sepsis in the general system being absent. 2. Pain is checked by checking muscular action, as peristalsis. 3. In peritonitis peristalsis not only enhances the lymphs stream but mechanically distributes germs widely in the abdominal cavity. 4. Anatomic and physiologic rest aids to circumscribe infection and save the patient from operation and death.

HYDROTHERAPEUTICS IN GASTROINTESTINAL DISEASES.

By George Mannheimer, M. D., Attending Physician to Mt. Sinai Dispensary. Read before the Metropolitan Medical Society, April, 1902.

The most important and valuable hydrotherapeutic procedures in gastrointestinal diseases are lavage and douching of the stomach and lower bowel.

We wash out the stomach in all cases where the onward movement of the gas

We wash out the stomach in all cases where the onward movement of the gastric contents is interfered with owing to stenosis of the plyorus or the duodenum, with consecutive stagnation and fermentation, and in cases of intestinal obstruction. We furthermore practise lavage when there are accumulations of foreign substances in the gastric contents; for instance, mucus, as in chronic gastritis, pus from breaking-down neoplasms, superacid and superabundant gastric juices, as in gastrosuccorrhœa.

Nowadays intragastric hydrotherapy is used much more extensively; thus in the treatment of various gastric neuroses, motor and sensory. In cases of simple atony, a few washings of the stomach sometimes suffice to restore normal conditions, care being taken to avoid overdistension of the stomach and to evacuate all the water that has been introduced.

In gastralgia, douching of the organ with hot water may prove efficient. In nervous anorexia, nervous anacidity and subacidity, douching of the fasting stomach with water at 60° to 75° can restore normal secretions and the desire for food. Sodium chloride or infusions of bitter tonics are generally added to the water, in order to enhance its action.

The chemical and physical effects of such drugs as bicarbonate of soda, Emser or Carlsbad salt, bismuth or silver-nitrate, are utilized in many of the conditions mentioned, by adding them to water.

The rationale of intragastric hydrotherapy is easily understood in cases of ischochymia, where its action is purely mechanical. In cases of ileus, evacuation of the gastric contents, and the consequent relief of tension, create a kind of syphonage from the intestines toward the stomach, thereby relieving intestinal tension and affording conditions favorable to the overcoming of the obstacle. These washings have to be repeated frequently at intervals of two to three hours.

In functional disorders water of higher temperature acts as a sedative, cold water as a stimulant, to the motor and secretory functions.

The physical and moral effect of intragastric hydrotherapy certainly plays some part in bringing about the good results in some of these latter cases. Still, I want to emphasize that intragastric hydrotherapy in that group of cases commonly called gastrointestinal neurasthenia or nervous dyspepsia is very apt to prove a complete failure. This is preeminently the domain for the external aplication of water, which I will discuss later on.

In catarrhal jaundice, lavage of the stomach not only serves to relieve the distressing gastric symptoms, but may also help to dislodge, in a mechanical way, the plug of mucus occluding the common duct.

Dr. Ziemssen of Wiesbaden recommended gastric lavage with Wiesbadener Kochbrunnen (practically corresponding to normal salt solution) as a cure for habitual constipation. From one to two pints are allowed to run in and out by alternately raising and lowering the funnel. This procedure excites active intestinal peristalsis, and, if practised daily for several weeks, may accomplish permanent results.

The introduction of water into the lower bowel is one of the most popular therapeutic measures. It is performed in various ways, and is easily modified according to the end in view. We may thus use small or large quantities of water, at varying temperatures, in short or long intervals, under high or low pressure, in various positions of the patient, and with various additions, such as salt, soap, glycerin, or oil. The commonest indication is coprostasis, acute or chronic. Here the injection softens the fæces, thereby facilitating their expulsion, and excites the peristalsis of the lower bowel.. The best and simpest form of an evacuating enema for an adult is the injection of about a pint of water at 80° to 95°, with the addition of a little soap, administered from a fountain syringe in the recumbent position, and retained as long as possible. These injections may be used over long periods of time without doing harm.

The presence of oxyuris vermicularis, or other parasites, calls for mechanical cleansing of the colon.

All diseases of the large intestine are amenable to local treatment by means of water, but chiefly chronic cholitis with diarrhœa and mucus in the stools. Irrigations, with or without antiseptic or astringent admixtures, are here the most effective therapeutic procedures; likewise in ulcerations of the rectum and colon.

The best non-operative measures in chronic stenosis of the colon, in intussusceptions, in strangulated hernia, are high enemata of large quantities of water or smaller quantities, with the addition of 5 to 8 per cent sodium chloride, frequently repeated under low pressure, in the knee-chest or Trendelenburg position, eventually under anæesthesia. These measures may prove successful by removing fecal impactions, by facilitating the return of an intussesception, the untwisting of a volvulus, or the liberation of a strangulated loop. All these latter results, though difficult to explain in theory, have been observed in practice.

In the treatment of catarrhal icterus, irrigations of the colon have been recommended by Mosler and Krull. Mosler employs injections of a pint of lukewarm water three times daily, while Krull injects one to two quarts of water at 65°, and even lower once daily. The action of the former injections is eccoprotic, cleansing, diuretic, and indirectly cholagogue through increased absorption from the bowel, while the latter excite more energetic peristalis of the colon and, perhaps, indirectly of the bile-ducts.

In enteralgia or intestinal colic, due to spastic constipation, lead poisoning, high copious enemata at 100° F., frequently repeated, are very serviceable.

The effect of prolonged flushings of the colon with hot saline solution by means of Kemp's tube on the general circulation, on the skin and kidneys, is well known.

To supply the system with water, we use the rectal route in cases where the ingestion of water into the stomach is undesirable, as in gastrectasia, or in the beginning of an ulcus-cure.

The local effect of heat and cold on the rectum is utilized in the palliative treatment of hemorrhoids.

The benefits obtained from internal hydrotherapy, that is lavage of the stomach and bowel, in the acute gastroenterites of children, are striking.

Turning now to the external use of water, it must be stated that there are no special hydrotherapeutic procedures for gastrointestinal diseases. These furnish the principal indications for the local use of water in the form of compresses, other local applications and hip-bath.

Compresses require an exact technique and an exact understanding of their rationale. If we want to reduce temperature and combat cerebral symptoms, as in the acute gastroenteritis of children, we apply a compress around the entire trunk of several layers of linen, well wrung out in water at 60° F., and covered by dry linen or flannel, and wet it again every hour until the desired effect is obtained.

Stimulating compresses covering the entire trunk or only the abdomen are applied in the same way, but they remain on the body until warm, that is for about four to five hours, or until dry—for instance, over night. They are indicated in chronic inflammatory conditions within the abdominal cavity, in venous stasis of the abdominal organs, and they allay manifold unpleasant sensations that interfere with the comfort and sleep of patients suffering from organic and functional disorders of the stomach and intestines.

Hot poultices have an undoubted value in favoring the absorption of local peritonitic exudates, whether these originate from a diseased appendix, from an inflammation of the sigmoid flexure, from perigastritis, or whether they form in the neighborhood of intestinal neoplasms. Poultices play an important role in the classical treatment of gastric ulcer. A hot-water bag placed over the abdomen is one of the most popular and effective applications to soothe intestinal colic. The so-called Winternitz combination compress deserves special mention because it is not well known. It consists of a stimulating abdominal compress, enclosing a rubber or Leiter's coil, through which water at 110° F. or more circulates continually. It is to be worn for an hour or longer at a time. It is a very effectual remedy for gastralgia, enteralgia, attacks of singultus or rectus, and for obstinate vomiting.

Local applications of cold in the form of iced compresses, rubber coils through which ice water circulates, or the ice-bag, are widely used in the treatment of diffuse and circumscribed peritonitis, to control hemorrhage from stomach and bowels, and in excessive meteorism. It is extremely doubtful whether an ice-bag really checks internal bleeding, or acts as an antiphlogistic on the locus morbi in acute appendicitis (perhaps, excepting people with very thin abdominal walls), but it certainly allays pain, compels the patient to lie quietly on his back, possibly lessens tympanites, and possibly inhibits peristalsis when applied for over an hour.

Sitz-baths or hip-baths powerfully influence the innervation of the abdominal and pelvic organs and the capacity of the abdominal vessels, the largest blood reservoir of the body, the filling of which controls, to a great extent, the general circulation and blood pressure.

Cold or very hot hip-baths contract the abdominal vessels, driving the blood to other parts, as evidenced by congestion of the head, increase of axillary temperature, rise of the plethysmographic curve of the arm, and lowering of the rectal temperature. If this thermic irritation lasts but one to three minutes prompt reaction ensues, that is active hyperæmia of the abdominal organs, but if it lasts ten minutes or more, prolonged ischæmia of that vast vascular area takes place, with weak and retarded reaction. Short cold hip-baths stimulate peristalsis, prolonged cold ones inhibit it, prolonged warm ones soothe pain and spasmodic contractions. Short cold hip-baths (50° to 65°) are therefore indicated in all conditions of the abdominal organs which are due to anemia, venous stasis, motor and secretory insufficiency, torpid metabolism—for instance, in atonic constipation. Hip-baths at 50° to 68°, lasting ten to thirty minutes, according to Winternitz, act almost specifically in checking all forms of acute and chronic diarrhœa. They are, furthermore, indicated in bleeding and inflamed piles. Prolonged tepid hip-baths, at 70° to 80°, have a similar though milder action. Hip-baths at 90° to 100°, of one to two hours' duration, are suitable for colic and tenesmus.

All these local applications are very advantageously combined with general hydriatic procedures, thus the short cold hip-baths recommended in atonic constipation and flatulence are preferably followed by a douche of gradually-reduced temperature or a Scotch douche on the abdomen, and later by a stimulating douche to the entire surface. The prolonged cold sitz-baths are appropriately preceded by a drip-sheet and vigorous friction.

Hydrotherapy should be general whenever possible; that it, it should be applied to the entire surface of the body, because its best effects are brought out in that way; namely, its influence on circulation, respiration and innervation, over secretions and excretions.

General hydrotherapeutic procedures find their greatest field of usefulness in chronic disorders of the gastrointestinal tract, especially the functional ones, be the latter a manifestation of neurasthenia or hysteria, or the primary cause of the disturbance of the cerebrospinal centers. The constitutional tonic treatment, as carried out to greatest perfection at the Hydriatic Institute and the Riverside Baths, consists of graduated douches (circular, jet and fan douche) of one to two minutes' duration, preceded by artificial warming of the body and followed by friction.

The following measures are appropriate for home treatment. Ablutions by means of a rough towel, a bath glove, or the hand with water at 80°, reduced one to two degrees each day down to 60°; affusions with water at the same temperature; the drip-sheet from 70° to 60°; the cold plunge; and the wet pack from 70° to 50°, followed by a half-bath from 85° to 80°. We employ one or the other of these applications, according to whether symptoms of irritation or depression predominate in the particular case, and whether the patient is poorly or well-nourished, anæmic or plethoric. It is the great advantage of hydrotherapy that it can be so modified as to suit almost any case and condition where it is at all indicated.

In conclusion, I wish to say that I have achieved my best results in the management of gastrointestinal diseases by combining the hygienic, dietetic, and medicinal treatment with hydrotherapy.

—Med. Record.

GENERAL PARESIS, Practical and Clinical, by Robert Howland Chase, A. M., M. D., Physician - in - Chief Friends Asylum for the Insane, Philadelphia, etc. Illustrated. Philadelphia: P. Blakiston's Son & Co. Price $1.75 net.

The above work is timely and well arranged. As it has been prepared by one of wide experience in the treatment of paretics, as well as those of kindred nervous diseases, it cannot fail to meet the wants of those who seek for advice in the care and treatment of this class of cases. It should be in the hands of students and general practitioners, as these are the first physicians to have the opportunity to meet and diagnose the disease in its early stages, and before the actual degeneracy of the brain cells has become fixed; as after this period there is not much expectation of recovery under any form of treatment.

The illustrations, taken from living subjects, are reproductions of photographs from the records of the Pennsylvania State Hospital for the Insane, at Norristown, and each stage of the disease has its representative likeness. This is a practical feature of the work and will aid the reader of the descriptions of the text in his diagnosis of cases that will come before him in his general practice.

We can cheerfully recommend the book to the profession, feeling that it will afford much assistance in seeking for information concerning paresis, which is becoming more frequent in the fierce competition for business and wealth in these latter days, and especially in our larger cities.

Medical Miscellany.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION meets in Kansas City, October 15, 16 and 17, 1902. The address on Medicine is to be made by Dr. Hugh T. Patrick, of Chicago; the address on Surgery by Dr. Geo. W. Crile, Cleveland. Among those who will attend and read papers, are: A. J. Ochsner, of Chicago; Bransford Lewis, of St. Louis; J. E. McNeil, of Denver, and Vincent J. Hawkins, of St. Paul.

DOUGLAS COUNTY (WIS.) MEDICAL SOCIETY. (From Superior Evening Telegram, Sept. 9.) The annual meeting and banquet of the Douglas County Medical society was held last night at the West Superior hotel.

This is the fifteenth year for the society and its membership includes most of the prominent doctors in the county.

The business meeting of the society was called early in the evening and the election of officers for the ensuing year then took place, resulting in the election of the following men: Dr. H. J. O'Brien, president; Dr. C. H. Mason, vice president; Dr. S. G. Pake, secretary; Dr. P. G. McGill, treasurer; Doctors Ground, Specht and Moody, censors. After the business meeting was over the members adjourned to the dining room where a most elaborate banquet was served.

Dr. Orchard, the retiring president, made the speech of the evening. He spoke of the great benefit the members derived from these meetings and the reading of the papers on the subjects which are questions of agitation all the time, of the successful years the association has passed and of the injurious effect upon the profession of the so-called expert testimony given in the courts.

Following Dr. Orchard's speech in behalf of the society, Dr. Potter presented a cane to Dr. Gould, who leaves shortly for Tucson, Arizona, where he will establish a sanitarium for consumptives.

The toasts were the next thing on the program, and with Dr. O'Brien acting as toastmaster some very witty and humorous speeches were made. All the members were called to respond to toasts, and some of them touched upon the early experiences of country practitioners, many funny personal stories being told. The last number on the program was a speech by Dr. O'Brien on the relation of the press and the medical profession. Those present were: Doctors McGill, Pretts, Pake, Moody, Ground, Orchard, Saunders, Potter, Quinn, Conkey, Mason, Darrow, O'Brien, Gould, Specht, and Russell.

MINNESOTA STATE MEDICAL ASSOCIATION COMMITTEES. Dr. J. W. Andrews, president of the M. S. M. A., has kindly furnished the Medical Dial with a list of the Association committees for 1902-3, as follows:

Executive Committee: Dr. E. J. Abbott, St. Paul, chairman; Dr. E. L. Green, St. Paul; Dr. Archibald MacLaren, St. Paul; Dr. G. G. Eitel, Minneapolis; Dr. Franck Todd, Minneapolis.

Committee on Finance: Dr. Herbert Davis, chairman; Dr. J. A. Quinn, Dr. H. J. O'Brien, Dr. A. W. Dunning, and Dr. Burnside Foster, all of St. Paul.

Committee on Publication: Dr. Arthur J. Gillette, Seven Corners, St. Paul; Dr. W. E. Rochford, Pillsbury Building, Minneapolis; Dr. Geo. D. Head, Andrus Building, Minneapolis; Dr. Max P. VanderHorck, Pillsbury Building, Minneapolis; Dr. Frederick Leavitt, Seven Corners, St. Paul.

Committee on Necrology: Dr. E. D. Steel, Mankato, Minn., chairman; Dr. E. J. Spratt, Minneapolis; Dr. J. H. Dunn, Minneapolis; Dr. J. W. B. Welcome, Sr., Sleepy Eye; Dr. A. T. Conley, Cannon Falls.

Committee on Nomination: Dr. A. C. Wedge, Albert Lea, 1st Congressional District, chairman; Dr. A. O. Bjelland, Mankato, 2nd; Dr. R. N. Jackson, Faribault, 3rd; Dr. A. J. Stone, St. Paul, 4th; Dr. E. Phillips, Minneapolis, 5th; Dr. A. F. Groves, Brainerd, 6th; Dr. H. M. Workman, Tracy, 7th; Dr. W. H. Magie, Duluth, 8th; Dr. P. A. Walling, Park Rapids, 9th.

State Organizer: Dr. W. S. Fullerton, St. Paul.

THE EFFECT OF REST IN THE PROGRESS OF SEPTUC INFECTIONS. A. J. Ochner calls attention to the part that absolute rest plays in the treatment of this condition. He does not underrate the value of moist antiseptic dressings and hygienic treatment, but insists that absolute rest is a valuable aid. He refers to fifty-two cases in which this was a factor in the treatment, with satisfactory results. He also refers to the good results he has secured in the treatment of peritonitis complicating criminal abortion by maintaining absolute rest. Having become dissatisfied with the saline treatment, the author has abandoned it, substituting rest for the gastro-intestinal tract by means of gastric lavage and rectal alimentation. In local peritonitis complicating gall stone attacks, absolute rest with no food by the mouth inhibits peristalsis and brings about localization and absorption.—American Medicine, Aug. 30.

"THE MODERN UNIVERSITY SCHOOL, ITS PURPOSES AND METHODS," is the title of an exhaustive article written by John M. Dodson for the educational number of the Journal of the American Medical Association.

The author points out the fact that the earliest medical colleges were an integral part of institutions of general learning, but that as the conditions changed there became established independent medical schools governed by medical men who took time from their daily practice to teach the medical sciences. In the early times in this country there was a decided demand for physicians and the great question was how to induce men contemplating the practice of medicine to enter a medical college at all. Another reason for the independent medical school was that endowment for medical instruction was not forthcoming and the maintenance depended upon the fees of the students. Consequently, the standard of requirements for entrance was low in order that many students might enroll.

Now, however, there is no longer such a demand for physicians which would permit of the maintenance of schools other than those of a high character.

The writer favors a close, intimate relation between the medical college and the university, in which the financial control of the former would rest in the hands of a board of university trustees composed of men of large business experience. The medical teachers should be members of the university faculty and should have a voice in the educational policy of the institution, and the medical department should be under the guidance of the general faculty.

The author further advocates that the fundamental branches in the medical curriculum, viz., Anatomy, Physiology, Chemistry, etc., be taught by men, devoting all their time to these subjects, teaching them to the university student as well as to the professional student. He maintains that these are studies which are of general import, and pertain as much to the student of general education as to the medical curriculum. By delegating such subjects to men who devote their whole attention to them there would be inculcated in the mind of the medical student the spirit of investigation which would pervade the class-room and the laboratory, presided over by an investigator and a man interested in scientific research.

The author hints at the good to be derived from residence in a university atmosphere with its social as well as intellectual advantages. He advocates the establishment of a university medical school founded upon the broadest possible lines. Its purposes would briefly be: 1. To prepare men for the practice of medicine under graduate instruction. 2. The training of special students for teaching and research work. 3. To offer opportunities for physicians to keep abreast of the times by affording post graduate work. 4. The instruction of men for sanitary and public health service. 5. To investigate alleged new discoveries bearing on medicine and to educate the public in a medical way by university extension lectures.

As an ideal requirement for the entrance of such an institution the author recommends, in addition to a high school diploma, evidence that the applicant has pursued the two first years in a recognized college or university. He favors the plan of granting two degrees at the completion of a six years' course, an academic as well as a professional diploma. The advisability of compelling students to take practical examinations at the close of their medical course, with a view of determining their fitness for the work of the profession is strongly urged.

The author takes a most hopeful view of the situation, and believes that a univerity medical school established along these extensive lines is to be the great feature of future medical education. The expense of carrying out such a plan would, of course, be very great and can only be met by liberal endowment. The recent gifts to medical colleges and for medical research give promise of greater philanthropy in the future.

ROENTGEN RAY THERAPEUTICS.

Dr. William Allen Pussey, after careful investigation and experimentation concludes that X-rays have a destructive action upon tissues of low vitality, and that this effect can be utilized under suitable conditions to cause the destruction of such tissues without destroying the healthy tissues which are involved.

Microscopic study revealed a degeneration of some sort, taking place in the carcinomatous tissue, and a disappearance of this degenerative substance presumably by absorption. Firm healthy scar tissue takes the place of this material.

Dr. Pussey sums up his report with remarks concerning the advantages of this method.

1. It is painless.
2. It destroys diseased tissue, but leaves a healthy scar in its place.
3. It leaves small scars.
4. It can be used in cases where the surrounding healthy tissue cannot be sacrificed.
5. It is available in cases which are deemed inoperable.
7. It often relieves pain.

The author wishes it to be understood that he does not advise the X-rays as a substitute for operation in operable malignant growths. Its use is to be limited to those cases in which ordinary methods are inadvisable or impossible. He believes there should be no strong objection to the primary use of X-rays in the treatment of cutaneous cancers. —J. A. M. A., April 12, 1002.

TYPHOID FEVER INFECTION BY MEANS OF UNWASHED FRUIT has been the subject of considerable investigation at the hands of the health authorities in Philadelphia and Chicago. In these cities this disease has been rampant and it has been suggested that the cause is not wholly dependent upon the character of the drinking water.

Bacteriological examination of the water in many cases did not reveal the bacillus, hence, the attention of the authorities was directed to other sources. Attention was called to the fact that the prevalence of typhoid was most marked at a time when the greatest amount of fruit was consumed, a coincident which leads the authorities to believe that unclean fruit may be a factor in the transmission of this disease.

It seems that definite conclusions concerning this matter could be arrived at by the city bacteriologists, if resort be had to the microscope and careful investigations be made.

Such an investigation was carried on this summer by the health officers of Havana with positive results. An epidemic of diarrheal diseases appeared, which led to an investigation. The Chinese truck farmers in and about the city were known to have pernicious habits. In the washings from the fruit and vegetables sold by these farmers it was discovered that a virulent colon bacillus was present in great numbers.

This alertness on the part of Havana bacteriologists should be duplicated in American cities where the eating of unclean fruit is commonly practised and where fruit is generally exposed to the dust of the street.—Philadelphia Medical Journal.

ROENGTEN RAYS IN THE TREATMENT OF CARCINOMA. That the Roengten Ray is of value in the treatment of carcinoma cannot be questioned. Morton, Allen, Weigel, Pussey and others have reported numerous cures in epitheliomata. The accessibility of carcinomata of the skin, tongue and even the cervix has rendered these forms more subject to experimental study. In this field, however, it is not advisable to discard the knife in favor of the rays, as the former provides a more rapid and effective means for the erradication of the disease. A combination of the two methods is to be considered.

The majority of cases of recurrent carcinomas are due to the inability of the surgeon to remove every vestige of the disease. Epithelial cells remain deeply seated and beyond the reach of the knife. Rarely recurrence is due to secondary foci.

If these carcinoma cells, which are out of the reach of the surgeon could be effectively destroyed, or if only a retrogressive change could be brought about by the Roengten rays, a great advance would be made in the treatment of this disease. This would establish for the rays a place in the after treatment of carcinoma as well as in the inoperable cases. The author has treated ten cases of recurrent carcinoma mammae after the operation, in all of which beneficial results were obtained. Irradiation is begun immediately after union takes place, and is continued for several weeks.

The soft tube is advisable for use in integumental growths or even in carcinomata situated beneath the skin. The hard tubes are to be used in deeply seated growths, but not much is to be expected in the treatment of growths of this character, as the rays do not reach them in a strength to cause metamorphosis of the cells.

The author follows the plan of exposing the tumor to the rays for five minutes at first, and after a week, for ten minutes.

If, after a third exposure, two weeks after the first exposure, no reaction has been shown then it may be considered that the patient has no idiosyncrasy. Then he may be irradiated every second or third day, and finally, daily, till intense reaction appears.

During the early exposures the tubes should be four inches from the tumor, but it can be gradually brought to the surface.—Carl Beck at the last meeting of American Therapeutic Society.

SODIUM CINNAMATE IN CHRONIC DISEASES. Alfred Mann discusses the efficiency of this drug in tuberculosis. Sodium cinnamate apparently increases the number of leukocytes in the blood to a great extent, thus adding to the healing capacities of the tissues.

It is more effective in the early stages of the disease, and in the less severe cases. Iron, Strychnine and other tonics are administered in connection with this drug, which is given in intra-venous injections. The author has had six years' experience with the use of this remedy and claims that the results as to the permanency of cure are very encouraging.

The author gives histories of several cases treated by this method, two of which follow:

1. A man thirty years of age presented evidence of tubercular invasion, extending to the fourth rib on the right side and to the third rib on the left side. A disturbed condition of the gastro-intestinal tract existed and nervous symptoms, suggesting neurasthenia. One hundred injections of sodium cinnamate given during the course of a year have been accompanied by a disappearance of all the physical signs with the exception of a slight dullness existing in the right apex and an occasional click in the same area. The general health of the patient has improved and the expectoration and cough have ceased.

2. A woman twenty-four years of age sought treatment for acute tubercular involvement of the lymphatic glands of the neck. After two months' treatment with sodium cinnamate these glands, which were about the size of a small hen's egg have de-

creased in size, till now they are almost unappreciable.—Philadelphia Medical Journal, March, 1902.

SODIUM CINNAMATE IN CHRONIC DISEASES. Dr. Lovell Drage reports three cases treated with this drug. He uses a ten per cent solution of the salt in glycerine and ascribes the beneficial effects of the drug as being due to the great leukocytosis induced.

Case 1. A man over sixty years of age, emaciated and apparently suffering from tuberculosis, was the subject of the first trial. At the time of commencing treatment his weight was 108 lbs. In the next two weeks he lost two pounds. After this he did not lose weight, and the administration of sodium cinnamate was accompanied by a cessation of expectoration which was very profuse before this method of treatment was instituted.

Case 2. A patient over sixty years of age supposed to be suffering from cancer of the pancreas. Vomiting was marked and there was intense abdominal pain. He was given two injections a week, of thirty minims each. This was followed by a cessation of vomiting, the pain was relieved, and the delirium which had been troublesome disappeared. The patient had had three weeks treatment.

Case 3. The next case reported was that of a man thirty years old suffering from chronic inflammation of the middle ear. The tympanum on one side was perforated and he used this ear alone, with the aid of a trumpet. On the other side he was completely deaf and suffered acute pain. Two weeks' treatment with sodium cinnamate injections in the mastoid region was accompanied with surprising results. The hearing improved and the pain subsided.

The author has under treatment with this method a case of tubercular laryngitis which is progressing satisfactorily.

No disagreeable effects have been observed in the use of the drug. The author thinks that conditions like tuberculosis and cancer might be improved by the giving of drugs which by causing a leukocytosis would aid in tissue repair.—Lancet, July 12.

STATISTICS. There are one hundred and fifty-six medical colleges in this country having an attendance of 27,501 students. Five thousand and two were graduated in the school year 1901-2. In 1900-1 there existed the same number of schools with an attendance of 26,417, graduating 5,411. In 1882 there were 89 medical colleges, 14,934 students and 4,775 graduates.

It is thought that the check in the number of graduates is due temporarily to the increase in the standards required by the State Boards and the medical colleges.

Of the 27,591 students enrolled in the session of 1901-2 23,024, attended regular colleges; 1,687 were in homeopathic; 765 in eclectic, and 241 in physio-medical schools.

The records of the previous year show that this is an increase in all schools but the homeopathic. In this year the regular schools gained 1,032 students; the eclectics 99; the physio-medics 17, while the homeopathics lost 66 in enrollment.

COMMERCIAL RECIPROCITY. Mrs. Skiddings—I suppose you got a big fee, Dr. Fixem, for attending that boy with the fractured skull?

Dr. Fixem—Yes, I was liberally paid for the operation, but then I think I deserved it.

Mrs. Skiddings—I hope you will not forget that it was my Tommy who fired the rock that did the business.—Boston Transcript.

REASONS WHY HE CAME TO THE ASYLUM. The new patient explained his family relations as follows: "I met a young widow with a grown step-daughter and the widow married me. Then my father who was a widower, met my stepdaughter and married her. That made my wife the motherinlaw of her fatherinlaw and made my stepdaughter my mother and my father my stepson. Then my stepmother, the stepdaughter of my wife had a son. That boy was of course, my brother, because he was my father's son. He was also the son of my wife's stepdaughter, and therefore her grandson. That made me grandfather to my stepbrother. Then my wife had a son. My motherinlaw, the stepsister of my son, is also his grandmother because he is my stepson's child. My father is the brotherinlaw of my child because his stepsister is his wife. I am the brother of my own son who is also the child of my stepgrandmother. I am my brother's brotherinlaw, my wife is her own child's aunt, my son is her own grandfather. And after trying to explain the relationship in our family some seven times a day to our calling friends for a fort-night, I was brought here—no, came of my own free will."—Ex.

A BOY'S COMPOSITION ON THE BODY. "The body is divided into three parts. The head contains the brains if any, the Toerax holds the heart, lungs and liver, and the Diagram has the bowels, A, E, I, O and U, and sometimes W and Y.

"TOM SMART,
"His composition."

HOW TO ASSIST YOUNG GIRLS TO WOMANHOOD.

By Edward C. Hill, M. D., Denver, Colorado.

The primary establishment and the menopausal cessation of menstruation are the two crucial physical epochs of woman's life. The change from maidenhood to womanhood is one that involves the whole body, and manifests itself alike in the form, the voice and the sexual and nervous phenomena. In an ideal state of perfect health this transition into puberty should be as natural and uneventful as gliding from sleep into consciousness. Owing, however, to the present civilized modes of living, the cerebral development of young girls is fostered and forced to a degree that deprives the remaining tissues and organs of their necessary nutrition, and too often we are called upon to treat delicate girls that are like buds blasted in the blossoming. Many a woman traces back a prolonged existence of semi-invalidism to exposure and lack of care at the early menstrual periods. Tight lacing also predisposes to pelvic disorders by interfering with circulation and exciting utérine displacements. The strain of puberty upon the nervous and blood-forming structures may be too great in a subject hereditarily deficient in vital resistance and adaptability. So we may count among the morbid incidents more or less peculiar to puberity, chlorosis and aenias, peculiar to puberty, chlorosis and anemias, acute pneumonic phthisis, chorea and hebephrenia.

According to Emmet, more than half of all women who have suffered at puberty from menstrual derangements are sterile and delicate in after life. Skene has stated that his observations showed that the vast majority of incurable diseases peculiar to women originate in imperfect development and consequent derangement of function. This development is either primary, during the embryonic stage, or secondary, at puberty. Defects in the former are irremediable, whereas secondary deviations from the normal standard are both preventable and curable in most instances.

It is important in connection with the subject under consideration to bear in mind the essential reciprocal relations of the reproductive system and the general organization. As Virchow says, all the specific properties of woman's body and all her womanly characteristics, depend upon her ovaries. In other words a woman is not fully a woman unless her sexual development is natural and complete and in line with a healthy general organization. A beautiful illustration of sexual dimorphism has been furnished by Prof. Max Weber (quoted by Skene), who presented the case of a chaffinch in which the left side of the body had the female coloration and the right side that of a male bird, the two colors being sharply limited at the middle line. The bird was a hermaphrodite with a well-developed ovary on the side of the female plumage, and a testicle on the opposite side. The phenomena of menstruation offer the most palpable evidence of the onset of puberty. The precise nature of this rythmic cycle is over-shadowed by a jungle of theories, and, as Milliken well says, we can do no better in the present state of our knowledge than accept menstruation as a habit which has been nailed upon our race by hereditary, and which is for us an ultimate biologic fact.

Normal menstruation in temperate climates generally begins in the fifteenth year. In the tropics it appears much earlier, so that in Mexico one may see a grandmother of only twenty years. Within the Artic Circle Eskimo girls do not generally arrive at puberty until the eighteenth year. City girls usually have the menstrual flow earlier than do hard working country girls, in whom muscular exercise has the same derivative effect on the pelvic blood supply as too intense devotion to study. The time, amount and character of the mentrual flow vary normally within wide limits. The menstrual cycle for different individuals ranges in perfect health from two to six weeks. The average duration in the temperate zone is about four days. Soaking more than three napkins daily is considered abnormal. Anemic girls, as a rule, tend to menorrhagia; chlorotic ones, to scanty menstruation. Clots are present when the amount of blood is great, or the mucus and fatty acids scanty. A periodic white menstruation, from supersecretion of the uterine glands, is not infrequently noticed in the intervals midway of menstruation.

Menstruation is or should be a perfectly physiologic process. In the virgin disorders of menstruation of whatever nature are nearly always dependent upon the defective nutrition of the reproductive organs, and this in turn upon a blood supply insufficient in quality or in quantity. In the great majority of cases, therefore, our efforts to aid nature in effecting the transformation of the girl into a woman, should be in the line of a happy balance of nutrition between the special female organs and the body as a whole.

Hygienic measures are of the first importance. Fresh air and sunshine are always in order. Exercise is especially indicated for the fat and flabby chlorotic girl, and her diet should be restricted in sugars and starches. The highly active, intellectual girl must rest from her studies and try to become a little lazy. Proper precautions should be taken in regard to reasonable care of the person at the time of the monthly periods. Yet the physician should beware of unduly alarming his little patient, and so bringing about a condition of hypochondriacal valetudinarianism. Simple cleanliness is certain to do no harm, but good. The conservation of the general health and vigor is the chief factor in maintaining safe and easy menstruation.

In spite of hereditary defects, if the physician could have full control of the diet, clothing, hygiene and environments of the little girls in his clientele up to the date of puberty, but little if any medication would be then required. Unfortunately, however, the lack of harmonious development in the preadolescent period necessitates considerable medical attention to secure a normal course for the critical metamorphosis of puberty, whose influences, as Dudley remarks, are fundamental, not only in the reproductive organs, but in the entire woman. Actual pain at the menstrual period in the young virgin may be considered always pathologic, and the same is true of menorrhagia or very scanty menstruation. Such abnormalities of function should direct our attention to the state of nutrition especially. The obese, chlorotic girl must take more exercise; the thin, delicate sensitive girl, more rest. Fresh air and sunshine are needed in every instance. Red meat, eggs and other blood-forming foods should be taken in such quantities as can be well borne. The appetite for wholesome nutriment should be encouraged, if need be, by stomachic stimulants, such as the official elixir of strychnin, pepsin and bismuth. The use of bromides, coal-tar analgesics and diffusible stimulants at the mentrual periods can be regarded only as a temporary makeshift.

The most constant and positive clinical sign of imperfect puberty is deficiency of the blood in red corpuscles and hemoglobin, the chlorotic type being perhaps more common than the simple anemic in relation to menstrual disorders. Hemic defects and malnutrition act reciprocally as cause and effect. The oxidizing life of the blood is in the iron it contains, with about one-twentieth as much manganese. The total iron of the adult body amounts to but 2.5 or 3.5 grams, chiefly in the form of hemoglobin. The normal daily content of iron in the food of an average diet, is, according to Stockman, from five to ten milligrams. When absorbed, as in health, this food-iron replaces the metal continually lost by disintegration of blood corpuscles and execretion. The round of iron in the body seems to be from the duodenum to the mesenteric glands, thence to the thoracic duct, the general blood current and the spleen, from where it passes to the liver to be synthetized into hemoglobin for the red cells, on the braking down of which the dissociated iron is eliminated by way of the large intestine.

The use of iron in anemic and chlorotic conditions is, of course, a cardinal principle in therapeutics. In girls becoming women to supply a deficiency of erythrocytes or hemoglobin, one might infer at first thought that the best method would be to administer hemoglobin, that is, blood in some form. Chemistry proves, however, that when hemoglobin is taken into the stomach it is changed by the acid there to hematin (causing the coffee-ground color of small gastric hemorrhages), which, according to Cloetta, passes down the alimentary tract without being absorbed.

Most authorities conclude that inorganic compounds of iron in order to be absorbed must first be changed to albuminates by combining with food matters. All albuminous substances are hydrolyzed to peptons before they are capable of absorption. Hence it follows that a peptonate of iron is the preparation most likely to be readily and completely absorbed and assimilated. The best remedy of this composition, I think, is Gude's Pepto-Mangan, which I have used for the past ten years with great satisfaction, particularly in the hemic and nutritive disorders of female puberty.

This neutral solution contains three grains of iron and one grain of manganese in each tablespoonful. The latter ingredient is doubtless to be credited with a large part of the nearly specific effect of the remedy in functional menstrual derangements. The preparation is pleasant to the eye, agreeable to the palate and has the great advantage over inorganic iron compounds of not corroding the teeth, deranging digestion nor inducing constipation. According to the nature and severity of the case, the dose varies from a teaspoonful to a tablespoonful. It is well taken in milk or sherry just after meals.

The following brief clinical notes may serve to illustrate the facts above stated. The blood count in each instance was made with the Thoma-Zeiss hemacytometer; hemoglobin was calculated by the Hammerschlag specific gravity method. I need hardly remark that the blood findings at the altitude of Denver are normally higher than at points near sea level.

Case 1. Jose K., 15 years, thin, delicate and somewhat strumous, had menstruated irregularly and intermittently for 16 months: erythocytes 3,600,000, hemoglobin 58 per cent. She was taken out of school, put on a diet largely protein, given aloin, strychnin and belladonna pills for her bowels, and for her blood, Pepto-Mangan (Gude), a dessertspoonful four times daily after eating. Under this treatment she made an average weekly gain of 1¼ pounds in weight, about 150,000 red cells and 3 1-3 per cent hemoglobin, and was discharged cured in ten weeks.

Case 2. Alice R., 18 years, rather stout but pale, with greenish tinge; complained of palpitation and breathlessness on slight exertion; menstruation barely begun and scanty. She was made to take gradually increasing exercise on her bicycle, a cool bath every morning, less carbohydrates and more proteins in her diet, and Pepto-Mangan (Gude) in the dose above mentioned. She recovered from all her morbid symptoms within four months, and has since married and given birth to two healthy children.

Case 3. Amelia B., 23 years old, an overworked servant girl, had suffered since the periods first began, nine year before, with marked dysmenorrhoea, the flow being prolonged but rather scanty. The red blood cells numbered 3,800,000 per cu. m. m., with proportionate oligochromia. She was induced to rest at home and take six eggs daily, along with other nourishing food and Pepto-Mangan (Gude), a dessertspoonful four times daily an hour after food. She made a very rapid recovery, the red cells running up to 4,900,000 within two months and the menstrual periods becoming quite

MEDICAL DIAL

A Monthly Record of Medicine and Surgery

Published by MEDICAL DIAL COMPANY

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Medical contributions respectfully solicited from Regular Physicians. The editor or publishers will not be responsible for the opinions expressed by correspondents. No attention paid to anonymous communications. Reprints furnished only at actual cost.

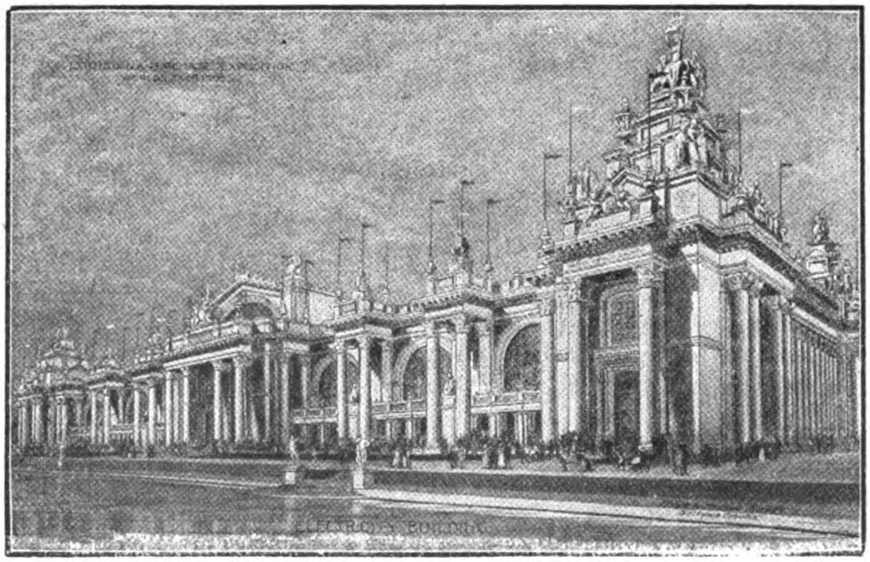
Entered in the Post Office at Minneapolis, Minnesota, as Second Class Matter.

SUBSCRIPTION PRICE

United States, Canada and Mexico, per annum, in advance,	$1.00
Foreign Countries in the Postal Union, per annum, in advance,	1.50

N B. Matter for the reading pages should reach office of publication on the 20th of the preceding month and display advertising on the 25th, to insure attention.

Vol. IV MINNEAPOLIS, MINN., NOVEMBER, 1902 No. 11



ELECTRICITY BUILDING, LOUISIANA PURCHASE EXPOSITION.

NEW POINTS IN THE SYMPTOMS AND TREATMENT OF MALARIA. An editorial in the Medical Examiner and Practitioner of New York, October, 1902, concerning malaria makes some new points in the symptoms and treatment of that old disease. The facts as to its cause are now very well established, and the mosquito is the guilty party, and not poisonous gases emanating from marshy and newly cultivated land, as, until recently, supposed. Sunlight, until recently, was generally supposed to dissipate the gases; but it is now demonstrated by Harrington and Seavering, that amebae are more active when exposed to strong sunlight and warmth, and especially under rays of red light, while darkness and violet rays inhibited their movements. Before these experiments and investigations, it had been noticed that patients did better when protected from the direct rays of sunlight, and the reason was given that the heat was the cause of the increase of fever in malaria; but it is now considered the cause rather than the result.

Celli and Tacchini, two Italian observers, noticed that the years in which the fever had been most severe were not the hottest, but when the number of cloudless days were above the average.

Jackson reports that when a camp in Jamaica was enveloped by a dense fog, the patients suffered less than those better situated, and several days of heavy rain improved the cases.

Flint also claims that paroxysms do not occur at night.

"Dr. A. F. A. King, of New York, was the first one to point out that it was the light rather than the heat that affected the plasmodium, and laid the basis for what he calls 'scoto-therapy,' or treatment, by confining the patient in a darkened room and clothing with garments impenetrable to light between the paroxysms."

THE GREAT COAL STRIKE. Thanks to one man's influence, if not to the "one man's power," the prolonged, expensive and exasperating coal miners' strike of 1902 is settled, apparently, on such a basis as will prevent a similar outbreak for some years to come at least. If this country is to remain the "land of the free" in reality, as well as in name, there must be some power inherent in the government to protect individual liberty in some things, and one is the right to work, when willing, without molestation, and the right of employment without dictation from any party, creed, or color.

HEART SEWED UP. Mrs. Annie Kingsley, of New York, was stabbed by her husband in the street during a quarrel, the knife penetrating the left ventricle of the heart. She was taken to the Bellevue hospital in a dying condition, and the surgeons, during intervals between the beats of the heart, inserted six sutures and stopped the flow of blood. The patient rallied rapidly, and the result promised a successful result.

The surgeons did their work Oct. 20, but on the third day following the patient collapsed, and no medical skill was able to save her life. It was shown, however, in the autopsy that death was due to septic poisoning, probably caused by impurities on the stabbing knife. It was shown that the wound had healed perfectly.

It is reported that the State Examining Board of Indiana has refused to grant Dr. A. A. Ames, late mayor of this city, a temporary license to practice medicine. The reason expressed by the board is that Dr. Ames is apparently a fugitive from justice.

Here is a sample of a college yell:

"Well man, sick man, dead man—stiff;
Dig 'em up, cut 'em up—what's the diff.
Humerous, tumerous, blood and gore!
Syracuse medicos, 1904!"

Medical Articles.

IN THE PROGRESS OF MODERN MEDICINE. From Symptoms to Disease. By Franklin Staples, M. D., Winona, Minn.

The claim that medicine in its entirety is not strictly a science may not well be denied; but the statement to that effect is liable to be misleading. There is, moreover, no less objection to the idea that it is simply an art. Is not the truth in the matter more correctly expressed in a definition with explanation something like this: The general structure of the theory and practice of medicine rests upon and has for its essential parts the elements of true science? Is it not as a whole a combination of principles in science, rather than a distinct department? Human anatomy, physiology, chemistry, and now pathology, in its parts, are among the true sciences involved in general medicine. The term, science, signifies knowledge. The claim that the knowledge of many of the different parts or essentials of practical medicine has not yet arrived at that degree of exactness and certainty that entitles them to the distinction implied in the term science, will hardly continue to hold in the light of present progress in medicine. The design here is to notice in a few words something of the nature of this progress and of its practical significance and advantage. Observation in a single direction may aid in determining much concerning what has been the character and direction of progress in the near past.

First, of Diagnosis—Its Ways and Means. For determining the nature of disease, is the present study principally in the domain of symptomatology or pathology. Do we trust altogether to what appears to be, or do we seek to determine actual existences? In former times the consensus of apparent symptoms was the principal or only means of determining the nature of disease; and while the better minds with such means were able in a proportion of cases to arrive at correct conclusions, and establish doctrines which have continued, yet errors of great magnitude were not uncommon, and some of the results of these have lasted. Witness the medical delusions principally of the seventeenth and eighteenth centuries, but not unknown in the nineteenth, and with the remains of some still in existence—The king's touch for scrofula, the weapon ointment, the tar-water cure of Bishop Burkeley, Perkinism, or cure by mental tractors, Mesmerism, the similia similibus curantur, and the faith cure of modern times. These and other medical delusions of different periods were more or less the outgrowth of the vague notion of uncivilized times, that disease is an evil entity of itself, and that the cure consists in the expulsion of the disease demon from the body. An understanding of the true pathology of disease, as an altered condition of the tissues of the body, has been the efficient means of overcoming such mental vagaries and false beliefs in medicine, and upward progress has kept pace with the advancement of knowledge in the world. The value of symptoms in diagnosis cannot be ignored. Under correct observation and estimation they have their place in pointing to what lies beneath—The latter being determined, the correct diagnosis is complete.

In Pathology.—The present outlook in medicine shows the greatest progress in recent years to have been in the department of pathology. Departures in this line have been clearly in the way of true science. The work of advancement has not been confined to any locality. While the German schools may justly claim the lead in this, a portion of the credit belongs to those of every country and people. The lives and works of such men as the late Rudolph Virchow, of Koch, Loeffler, Klebs, our own Sternberg, and of many others, are in evidence. Modern developments in the great department of bacteriology in pathology has marked an era in the rise and progress of realty in medicine. By this especially have new departments been created and others enlarged. both in the schools of instruction and in the domain of state preventive medicine. From the schools are the physicians, and to schools and physicians, and to the growth of science and art, is the credit for modern advancements in practical medicine. The diagnosis of disease by pathological investigation has become a demonstration. The pathology of disease, when known, not only assures the diagnosis, but is the correct guide to management.

The Physician—Requirements and Advantages.—The physician, whose term of professional study begins with the school entrance and continues through life, with present requirements has corresponding advantages—this at school and in the field of practice. The school training time has been lengthened and post-graduate schools established, facilities for clinical observation largely increased, laboratories made to include the later foundation work, and all have been made to include the educational essentials of practical modern medicine.

The physician in practice may have the aid of the school and public laboratory, but he requires his home facilities for constant work. The office laboratory outfit includes the microscope, culture tubes, and material for ready work in pathological diagnosis. For success in this as in other professional service, an essential requirement is a practical familiarity with the work on the part of the physician operator.

It is seen that the advancement of modern medicine is towards that realty which exists in the domain of true science, and the work of the physician which tends in this direction, is of the kind to remain.

MELANCHOLIA. Notes on a Lecture before the Senior Class of Hamline University Medical Department, by C. K. Bartlett, M. D., Professor of Psychological Medicine.

Fellow students: I will call your attention in this lecture to that form of mental disturbance designated Melancholia, and as we shall have frequent occasion to use the words Hallucination, Illusion, and Delusion, it will be well to have a clear understanding of the meaning of these expressions, and the relations they sustain to each other. Not every good doctor, when called upon to define these terms in court by a savage lawyer, is able to avoid some confusion. I will give you a short definition of each so that it will be easy for you to remember them. Hallucination is the mental perception of an object by a person, while others know it does not exist; for instance, one may think he sees visions, or hears voices, that are not real objects or voices. An illusion is the perception of an object that does exist but is recognized in a different character; as real sounds are given false interpretations, and persons are called by wrong names. A delusion is a belief in something that does not exist; or that others know is not true; as one may believe that all his friends are enemies, or that he is being persecuted, that he is dead, that he is a king, or the Deity.

Melancholia, in some of its different forms is a disease you will frequently meet, and you may often feel undecided as to the best course of treatment to pursue; but it is one of the most important in all its bearings concerning the patient, the relatives, and the property that may be involved in your recommendations. It is not always easy to determine just where simple depression ends and insanity begins, so gradually does the one shade into the other; but this is a point that must be settled as clearly as possible before deciding on the line of management for the patient; a simple depression that may depend upon some slight and temporary functional disturbance of the liver or bowels will call for very different treatment from that depression that has developed into melancholia with delusions. Upon your opinion and dictation may depend the liberty and safety of the patient, and perhaps that of his friends.

Although melancholia is sometimes described under two forms only, viz:—Melancholia agitata, a condition of restlessness, and Melancholia attonita, the passive stupid state, I think we shall obtain a clearer knowledge of the disease by following the several forms as noted by Dr. T. S. Clouston, who thus enumerates them for study.

Simple melancholia.

Hypochrondriacal melancholia.

Delusional melancholia.

Excited (motor) melancholia.

Resistive (motor) melancholia.

Epileptiform (convulsive) melancholia.

Organic (coarse brain disease) melancholia.

Suicidal and homicidal melancholia.

Here are eight forms, and to them I will add one more, viz:—Traumatic melancholia. Typical cases of any single one of these forms, and remaining so, we must not often expect to see; but the same case may exhibit several of them during its course.

1. Simple melancholia. This is a sequel to what may be termed mental depression in its mildest form, a condition not very unusual in the life of many persons burdened by cares and anxieties; they are persons who, perhaps, have inherited some neurotic weakness; they seldom consult a physician for treatment, and are not often committed to a hospital, being able to care for themselves, and transact business. They are usually intelligent, often have more than ordinary sagacity, and not unfrequently accumulate large fortunes by their prudence and ability. They may vibrate between depressed and exalted mental conditions, but do not in either state pass beyond a point of reasonable self-control; but these are the cases liable, under adverse circumstances, or prolonged ill-health, to become insane. These are the persons that should be on their guard against breaking the rules of mental hygiene, and the laws of health.

2. The Hypochrondriacal form is more marked in character, and is consequently a more serious affection. The symptoms are more decided; the self-control may not be lost, but the thoughts and speech of the patient will be morbid to some extent; he will be inclined to talk much about himself, and his feelings, perhaps not to every one or to strangers. He is inclined to exaggerate his illness, and magnify his pains, most of which may be wholly imaginary. While in this condition he is often a subject for ridicule by his friends and acquaintances, his descriptions of trouble being laughed at and lightly treated. There are no limits to the fancies of the hypochrondriacal melancholic; the patient's feelings all center around himself, his health, and the performance of his bodily functions. In drawing the line between sanity and insanity in these cases each individual must be considered separately, and all the symptoms and manifestations viewed as a whole, as there will be no distinct line of demarkation. A person may have many absurd fancies about himself, but if he continues to attend to his business in a proper manner, if he does not attempt to harm himself or others, if he has a fair amount of self-control, and is able to restrain his whimsical ideas and his conduct, we can call him a "Hypochrondriac;" but if he has continued mental depression, and cannot throw it off at will and loses self-control, and shows any delusion as to his friends or himself, threatens suicide, is careless in his habits and outrages decency openly, then he has passed the border line of sanity, and is a proper subject for medical treatment and restraint.

3. Delusional melancholia: This is that form of melancholia that apparently begins with a delusion, remains fixed throughout the attack and so prominent as to be considered by the friends of the patient as the cause of all the mental trouble; but in fact in the majority of cases the delusions are the result of the disorder of the brain, developed from a hereditary tendency, and excited by some bodily disease or other depressing agency. The delusions of melancholics are infinite in number and variety; those that refer to the person's body or health, or to the organic functions are most nearly allied to the hypochrondriacal; and the most common delusion is in regard to the stomach and bowels; the brain is rarely referred to or accused of any unusual action; but the stomach is utterly used up and gone; no use to put food into it, as there is no digestion there; or it may be there is a snake there that takes all the nourishment designed for the body, and he will insist, perhaps, upon an operation to remove the monster, and may attempt it himself if the instrument should happen to be at hand. Another delusion frequently met is in regard to the bowels; they are all dried up, and have disappeared;

costiveness, which is often present to some extent is exaggerated. The sense of taste is perverted, and also that of smell. Some will imagine they have paralysis and will not move a limb till they forget their fancy for a moment; some think they are all glass and they will break if roughly handled. Some take food voluntarily, although positively asserting it is of no benefit to them; others refuse and require forcible feeding; these are always difficult to manage, are frequently suicidal, and are not the most hopeful as to recovery. Cases have been reported where it appeared that the delusions might have had their foundation on real abdominal diseases; two brothers were committed to an insane asylum having almost the same delusion; both died and the autopsies showed that one had obstruction of the bowels, and the other of the bile-duct; in both cases there was found degeneration of the brain cells. Cases of this class have been called "Viceral" or "Abdominal melancholics."

4. Excited (motor) Melancholia: These are the cases mentioned by Spitzka as "Melancholia Agitata," and they are characterized by constant motion. The motor centres are affected to a greater extent than in the other forms; the patient rushes about moaning and wringing the hands, crying loudly, without shedding tears, however, tearing the clothing, and sometimes with violent demonstrations towards others. The countenance is sad, the picture of despair and mental pain. Women more frequently present this type than men; there is probably, no real pain in the head or any part of the body; as when the patient's attention can be obtained for a moment, the whole aspect will change, and the paroxysm cease. In this form of melancholia, patients are apt to be afflicted with irritation of the skin in some degree, which they will pick and destroy, more or less, and with great persistency. They require, sometimes, mechanical restraint to prevent serious injury. There is probably, some unnatural sensation of the surface, and this leads to the delusion. I recall some peculiar cases of this description; one, a farmer about fifty years old and much reduced in flesh and vitality, became melancholy and was committed to the hospital. He had the delusion that he was covered with vermin; he had illusions of sight also as well as delusions as to objects; he would spend hours picking minute particles of dust or other substances from his skin, and sometimes took the cuticle in his pinch, and throwing the imaginary insect on the floor stamp on it very heartily. This condition lasted several months, until his general health, by tonic treatment, improved, and he fully recovered. Another interesting case I saw in consultation. The husband of the patient had occasion to camp for a while with his workmen and he noticed that he had some parasites in his clothing, and on his return home he told his wife she had better examine them; she did so and has continued ever since to look for lice in all the clothing and furniture, and it is now more than five years since this habit was established. If a visitor comes into the house for a few minutes only, the chair he occupied must be thoroughly examined as soon as he is gone. She knows it is a foolish habit, and will talk and even laugh at it, but says, "She cannot help it, although she does not really expect to find anything."

5. Resistive (obstinate) Melancholia: This form of the disease is not very different from some of the others, except that the patients make an unreasonable and persistent resistance to everything that others wish to do for them. It may be active or passive resistance; that is they may become violent if disturbed, and urged to do anything; or they may remain quiet but refuse food or to dress or undress. They will not aid in making themselves comfortable, or allow others to help them to any comforts; these are difficult cases to care for, as in their resistance to that which must be done for them, they are liable to be injured under the most skillful and gentle treatment. They are usually inclined to be suspicious, to fear poison in their food, and will resist forcible feeding; but sometimes after a little has been taken they will continue to eat voluntarily. Occasionally some will eat if food is left where they can find it, and take it without being seen. They are inclin-

ed to stand up, and will not stay in bed unless confined in some way, and they must be forced to take the horizontal position, as to stand up all day and any part of the night is very exhausting. That these patients have delusions is usually clear; but it is sometimes difficult to ascertain just what they are; and after they recover they will remember and tell just how they felt. Although we are quite sure that they understand everything that is said to them, we know their resistance is but a symptom of disease, and it must not be treated as sane obstinacy.

6. Melancholia with Epileptiform attacks (convulsive) melancholia: This form was first described by Dr. T. S. Clouston, of Scotland, and he considers it the most serious variety of the disease, having some distinct symptoms, and a pretty distinct pathology. The mental depression is very great. The convulsions occur at rare intervals, but are sometimes prolonged, and there is a high temperature afterward as in general paralysis; they differ entirely, the Doctor thinks, from ordinary epileptics, and from the cases with occasional epileptic fits that sometimes occur in advanced dementia, as the brain gets wasted. I cannot now recall any cases that I can place in this class; but I presume the Doctor is correct in his observations, and as he has a record of only eight cases in a somewhat extensive experience, it is possible that none exactly similar have fallen under my care, or the peculiar characteristics have been overlooked.

7. Organic Melancholia: (The melancholia accompanying gross organic brain disease). This form is seen occasionally in the beginning of organic disease of the brain, such as tumors, softening, and wasting of the brain substance. It is usually gradual in development, corresponding with the growth of the brain trouble; only a slight deviation from the normal condition will be noticed at first; there will be a tendency to make little mistakes, some loss of memory, and a general dislike to do the usual work or business. The melancholia seldom assumes the excited or distinctly suicidal form, but the patient is inclined to be stupid, and the result is dementia. In the early stages it will be impossible to distinguish it from ordinary functional disturbance; but the progressive nature of the symptoms will point, sooner or later, to the real diagnosis.

8. Suicidal and Homicidal Melancholia: This must not be considered a distinct form on account of the suicidal and homicidal tendencies alone, as all cases of melancholia are liable at any moment to become unsafe in this respect; but there are cases in which these propensities are not so prominent that they claim special attention, and are properly designated by that term. Thus it is well to be prepared for any attempt of this nature even in the mildest forms of melancholia, as well as with those who have threatened or attempted the act. In some instances the propensity is active, and constant; they are on the watch and planning to accomplish their purpose, while in others it is impulsive, and the act is committed by the suggestion or the sight of some instrument at hand, or some favorable opportunity presenting itself suddenly. In my early experience among patients of this class, it was considered safe by the most competent experts to put suicidal patients in associated dormitories to sleep, and to have them constantly in the presence of others during the day, as they were not supposed to be inclined to injure themselves except when alone; but that precaution has not proved sufficient in all cases, as I have records of cases throwing themselves under car wheels in the presence of others, and some who have committed suicide in dormitories without disturbing their comrades. The proportion of homicidal to suicidal melancholiacs is very small, and in most cases when it exists it is not an impulse to kill, apparently, as an object to destroy, but is often committed with the idea of saving from want, or other misfortunes, and is generally manifested towards members of their own families, or persons depending upon them for support.

There are many ways in which suicide is accomplished, varying with the traditions and customs of the people. In ancient times it was usual for military men, officers at least, to fall upon their swords, and in Japan ripping open the abdomen is the fashion; but in modern times, and among civilized nations, hanging, drowning, firearms, cutting the throat, burning, poison, inhaling chloroform and ether, eating glass, throwing themselves from heights, under moving cars, make up the list from which to choose. As a rule a person will not attempt the act in more than one way if not successful; but there are exceptional cases in whom the propensity is so desperate that any means that has the promise of success will be used.

9. Traumatic Melancholia: Under this form I would class all cases of melancholia following surgical operations, and severe injuries from whatever causes, whether there were predisposing causes or not. Whatever occurs to the patient which exhausts his vitality and severely shocks his system is liable to develop some form of mental irregularity, and especially if there is a hereditary consitutional defect in the brain organization. It is, therefore, prudent for the surgeon, or attendant on such cases of injury or operation, to maintain the vital powers by every possible means at command.

A TYPICAL CASE OF THE TRAUMATIC MELANCHOLIA WITH RECOVERY.

The patient was injured in a railroad accident, just how seriously at the time I do not know, except that deafness followed, and in that respect he never improved or changed much; it was not total. After the injury he became melancholy, but did not show any symptoms of homicide.

His wife expressed some fear that he might injure himself; no means, however, were taken to watch him or prevent his action. During the night after the wife had expressed her fears to his brother, he killed his wife and four children, and had all the latter laid in a row on the floor of the house when visited in the morning by his neighbors; the body of his wife was outside, and the dog was also found dead in the woods near, to which he had marked a line of trees from the house to the remains. He was arrested but never tried as a criminal, his insanity being so apparent to the authorities. He was committed to the state hospital for insane, and for some months remained in a profoundly melancholy condition. Gradually he improved, began to talk and then to work, assisting at first about the kitchen, and after a considerable time was allowed more liberty, and finally his recovery being permanent apparently, he was discharged as a patient and employed as a farm hand. After several years of faithful and efficient service, he resigned his position, bought a farm in the neighborhood, married, and during the last twenty years has increased his property and raised a family of interesting and healthy children. He died two years ago of old age and a somewhat lingering illness. He never showed any symptoms of his former attack of melancholia, although he had one trial which might well have disturbed the mind of any farmer, and in fact was the exciting cause of several cases of insanity to my knowledge; and that was the "grass-hopper plague." During the invasion of those pests, he scattered straw around his fields of wheat and drove the hoppers out of the grain into the straw, and then burned the straw and hoppers together. This work he kept up day and night and with complete success, his stacks of grain in the fall standing alone in a devastated country.

THE INCEPTION OF MELANCHOLIA.

Nearly all of these cases begin alike; that is—with simple depression of spirits, a lack of interest in work, amusements and society. This may precede for months or even years a severer form that will call for decided treatment by restraint or otherwise. If the individual comprehends his condition, or his medical advisor understands the situation at an early stage, he can no doubt be saved from a complete breakdown. By a judicious course of life and work, and with suitable recreation, much can be done to avoid the danger of the disease becoming chronic, or passing into a graver form that may prove incurable.

In reviewing the several forms of melancholia, it must be kept in mind that few typical cases will be met under either one that will remain so for the whole period of duration; but the same case may change from one to another phase and several times, perhaps, and so continue to change for years, before recovery, dementia or death. In my experience exaltation alternates with depression, as a rule, and with more or less regularity, but at irregular periods. In passing from one state to another in feeling there is usually a time of longer or shorter duration when the patient may be said to be in a normal condition mentally. Persons at or beyond the middle age are most liable to attacks; partly I suppose on account of the more serious burdens and cares of life resting upon them at that time, and partly because the vital powers having attained their greatest vigor begin to wane.

PHYSICAL SYMPTOMS OF MELANCHOLIA.

Among the physical symptoms of this disease may be mentioned as commonly met with, headaches, neuralgia, constipation, a general weariness, loss of appetite, indigestion, and a feeling of restlessness, loss of flesh and energy. The face is usually pale and the countenance sad. The loss of appetite will terminate in repugnance to food; the tongue will become coated and the breath offensive; you will see very few cases in which the general health is not reduced. The skin will have a greasy feeling, but sometimes non-perspiring, hard and dry; the temperature in these cases being slightly raised, the pulse feeble, and the capillary circulation weak. The patient will assume one position and remain for hours without change or motion; perhaps look out of the window, or at some object for the whole day; absorbed in his own thoughts, or apparently without thought, he appears to forget everything and everybody except himself; if disturbed when in this position he is apt to be irritable. All the bodily organs should be thoroughly examined to ascertain if there is any real disease as the patient's conduct will have a tendency to produce some disorder, and functional disturbance when otherwise it might not exist; if anything unnatural is found it should be removed if possible whether there are any delusions connected with it or not. Quick and happy results sometimes follow the removal of some obstruction of the bowels or other organs.

CAUSES AND TERMINATION OF MELANCHOLIA.

The fundamental cause of melancholia is constitutional. This is the great predisposing cause and without it calamities and griefs may be multiplied upon individuals as disasters were thrust upon Job without diseased mental effect. Exciting causes are numerous and in the minds of friends of patients sufficient to account for the overthrow of the reason. Ill-health is a frequent cause, and domestic affliction with women, and business misfortunes wtih men. Nostalgia is a frequent cause, especially among those who remove from their native country late in life; Brower and Bannister in their late work, Practical Manual of Insanity, think this should be called a distinct form of melancholia.

As to the termination, melancholia is one of the most hopeful to treat of the mental manifestations, as a very large proportion recover and remain well for a period at least; relapses are to be expected, and especially if the patients are subjected to similar circumstances, and the same causes are repeated, but grave symptoms of mental disturbances may continue for a long time, and repeated attacks occur without apparent injury to the brain substance; in many cases it is clearly a functional disease of the bodily organs, and a return of the normal condition of the affected organ is attended with a healthy manifestation of the mind. Those cases that do not recover, or after repeated attacks do not improve, on account of bad health or chronic physical disease, gradually pass into dementia, and may remain in a comparatively comfortable state for the rest of their lives.

POST-MORTEM APPEARANCES.

Autopsies of cases dying after repeated attacks disclose atrophy of the gray matter; the cortex has been found softened more or less, also the Fornix, Corpus Callosum, Optic Thalami, and the Cerebellum. The cells of the gray matter of the convolutions were also found degenerated; hence it has been inferred that mental depression, of itself alone, is simply the functional expression of convolutional malnutrition.

TREATMENT.

The first step in the line of treatment in these as well as of all other diseases is to have a thorough personal examination, and ascertain, if possible, a complete knowledge of the history of the individual. The condition of all the bodily organs must be noted, as to their healthy or morbid state, and their functional disturbances if any. The causes for any irregularities must be found and whether they are physical or mental; the habits of the patient learned, and the kind of labor performed either by the hands or intellect; if there have been mental shocks caused by domestic afflictions or pecuniary anxieties; in fact all possible information must be gathered both from friends and the patient himself; you must learn whether he has become exhausted by the loss of sleep, or appetite, or any other depressing agency; the complexion must be noticed, whether healthy or unhealthy, and the countenance whether pale or sad; and inquiries must be directed concerning the inherited organization, whether any of the ancestors suffered from nervous diseases, and if so in what form; if they were intemperate, or eccentric in manner, if the parents were related to each other by kinship or addicted to any bad habits. Having learned all that is possible concerning these matters, and decided as to the form of melancholia from which the patient is suffering, it will be comparatively easy to determine what course of treatment to pursue, and to decide whether he needs restraint, to be removed from home and friends, or simply watched and cared for by his relatives; the latter course will be determined partly by the pecuniary ability of the subject and his friends but the question in some cases will come up as to what is best for the patient himself without regard to his means of support; home treatment may be given a fair trial; but as a rule, when melancholia is attended with delusions, and especially if these delusions are connected with any of the near relatives, as husband towards the wife, or the wife towards the husband, a removal from familiar scenes, and the contact with new faces and new environments, will often have the most salutary effect, and in many cases prove the most potent remedy.

All treatment of these cases is naturally divided into medical and moral; the former to correct and remove any irregularity or disease of the bodily organs, and the latter to divert and lead the thoughts of the patient away from his morbid contemplations of himself and into healthy and more cheerful channels. Generally the physical vigor will be found reduced, and the object of medical treatment will be to restore the system to its normal standard of health. To accomplish this we must make the conditions of life as favorable as possible, and then give therapeutic agents to act as tonics, hunger-producing assistants of digestion, and nerve stimulants. Pyrophosphate of iron in combination with Cinchona is one of the best of all tonics for the majority of these cases; but quinine, strychnine, the vegetable bitters, some acid phosphates will often be found useful; also the mineral waters, gentle laxatives, and stimulating cathartics. The late Dr Pliny Earle, always gave at first the compound cathartic pill, and I have known him while superintendent of the hospital for insane take the patient on his admission into the office and give him a dose before he was admitted to the ward. Electricity has been used in some instances with apparent benefit; but more has been claimed for it, perhaps, than strict truth would warrant; still it is worthy of a trial, as it serves as a diversion if not for any other purpose. Sleep must be secured, if not by such general treatment as may be indicated, then by some suitable narcotic; and for this purpose opium, in some form, is usually one of the best; but occasionally this will not be advisable, as there is always some danger of establishing the "Opium Habit," and thus making "the last condition of the patient worse than the first." Chloral will answer our need in many cases, and although there is a "Cloral Habit" formed, it is not so easy to establish as that from opium, and I have never known such a result follow in the many cases it has been administered under my care. When opium is given McMunn's Elixir is one of the best preparations. Dover's powder, although an old remedy, is still good as it opens the pores of the skin. Among more recent hypnotics recommended are bromidia, sulfonal, paraldehyde, trional and some others that may be found useful at times, as a change is frequently necessary. But whatever can be accomplished by medicine, and it is often of great service, suitable diet is of the highest importance, and must be the chief reliance in the management of the patient. The loss of appetite is one of the first symptoms, and the lack of nervous energy in the stomach is the cause of indigestion and the loathing of all food; and while the stomach is in this condition there will be no digestion, or assimilation of nourishment; but the patient must eat, must be fed by force if necessary, and it is criminal negligence to allow a person to die under these conditions, starved to death. To prepare the stomach for the reception and proper digestion of food is of the first importance. Sometimes it will be sufficient to wash out the stomach with warm water a little salted; this will stimulate it to action; a dose of whiskey or a glass of milk punch will frequently put a different face on all the symptoms. But when resistance is made to everything, and forcible feeding becomes necessary, I have often etherized the patient with great advantage, allowing the process to stop just before the stage of unconsciousness, when the patient will take the food and appear to relish it; the ether probably acts as a stimulant, and is just what the nerves of the stomach need to arouse them to normal activity. It is well to be careful not to overfeed these cases while under the influence of the ether, as the stomach might reject its contents; but if a moderate quantity be given at first there will be no danger of this and no further trouble with the feeding. It takes a little more time to feed in this way than with and by force; but it avoids a struggle with the patient, which may exhaust the sick man more than the nourishment may benefit, and the relatives, if you are obliged to feed in a private family, will not be shocked as they are apt to be by forcible feeding, if done in the most gentle manner, as to onlookers it seems a cruel proceeding, although when it is done by an operator of experience, who is quiet, and has the patient safely secured, and uses no unnecessary force, there is no cruelty in feeding with the tube. If the patient has fasted several days, and the bowels have not acted, it is well to give with the first feeding a stimulating cathartic and to encourage the movements of the bowels by enemae, repeated until free action is obtained. Fresh air and plenty of it is indispensable; you can require too much muscular exercise; but fresh air and sunshine can never be obtained in excess. We like to see the patient gain in weight, and for that purpose give fatty foods, milk, ham, eggs and easily digested meats, fish, fowl, and anything relished by the patient. A good cook for melancholics is a necessity.

MORAL TREATMENT.

In regard to moral treatment this opens a wide field for the exercise of the patience and ingenuity of the physician and the nurses. If you succeed in gaining the confidence of the patient much will be done towards his aid in co-operating and carrying out your suggestions. Have some system of daily routine to be followed as nearly as possible, with variations sufficient to prevent monotony; enjoin rest from work, exhausting work and worry, and endeavor to bring into action a different group of faculties and muscles from those which he has been accustomed to use. Do not insist upon such lines of action as are positively disagreeable, and send him into company just for the sake of society; but try to surround him with a few cheerful companions who will have a good influence on his spirits. Interest him if possible in some games and such as will take him outdoors when it is not too warm. Never argue with him concerning his delusions, but when necessary you can simply express your disbelief in them, and when he is improving it may have a good effect; he may be induced to question in his own mind if you are not right, and in that way be inclined to correct his mental obliquities. Discourage him from thinking and talking about himself, and turn his thoughts into other channels, and do not always let him have his own way of doing things; but when necessary to oppose him do so quietly and firmly as you would treat a child, giving him to understand that he is under your care, and that you know and will do what is best for his good. If it should become necessary to send a patient to the hospital for insane, and he is of sufficient intelligence to understand the proceedings, tell him frankly and truthfully your intentions, and do not try to deceive him as to the character of the place to which he is going by telling him it is a hotel or a doctor's boarding-house, as friends of patients often do. One good reason for separating melancholics from their friends and sending them to a hospital is the fact that they always exercise more self-control before strangers than at home, and it is just this effort for self-control that he needs to effect a cure; they are usually selfish and crave sympathy which is not good for them while in this morbid state, and they do not expect it from strangers. A patient once said, after his recovery, "I found myself among a lot of people who did not care a farthing whether I was miserable or not, which made me angry and I got well." Baths and massage are of great benefit, and especially if sufficient out-door exercise cannot be taken to keep up a good circulation of the blood. Counter irritation, which is partly medical and partly moral treatment, is often of advantage, mostly perhaps on account of directing the attention to something new, and it may also in some degree remove any sub-acute inflammation that may exist in the spinal cord. For this purpose Croton oil applied to the back of the neck and down the spinal column between the shoulders is the best irritant. It should be applied at intervals of a few days for several weeks, so as to keep up a constant crop of pustules. A crop of boils coming on, a carbuncle, an attack of erysipelas, and dysentry have been followed by recovery in many instances.

In the matter of preventable treatment you will see cases at an early stage and among young people occasionally when by a judicious course of treatment, in relation to diet, regimen, and education, much may be done to prevent the development of melancholia; and as to those who have suffered from an attack, the best advice to them is to maintain their general health by change and rest, recreation, and sufficient sleep.

SPLANCHNOPTOSIS. (Abstract Philadelphia Medical Journal). Byron Robinson reports a dozen years of investigations in the etiology, medical and surgical treatment of splanchnoptosis. He made some 600 personal autosic abdominal inspections and also presents 15 years of labor as a specialist in gynecology and abdominal surgery. He names 3 stages in splanchnoptosis viz; 1, relaxed abdominal walls; 2, distalward movements of viscera from elongated visceral pedicle. The mesenteries are not for mechanical support and hence the viscera will follow the relaxed abdominal wall. 3. Gastro-duodenal dilatation from compression of the transverse segment of the duodenum of the superior mesenteric artery nerve and nerve. Robinson says: In splanchnoptosis in general canalization is compromised, nerve periphery is traumatized, secretion, respiration, visceral function, circulation and muscular construction are disordered—ending in malnutrition and neurosis. The elements of the abdominal wall—elastic muscular and connective tissue cells—are elongated and separated.

Byron Robinson's plan of treatment is: 1, since the fate of the splanchnoptosis is constipation through visceral drainage i. e., with 8 ounces of hot half normal salt solution every two hours for six times a day. He adds an alkali tablet to insure regular daily action of the tractus intestinalis. 2.—An abdominal supporter inside of which he places a pneumatic air pad which may be distended with air to suit the needs and comfort of the patient. 3.—The union of the two recti musculi abdominales in a single sheath which he practiced since 1895. 4.—Gastro-duodenal dilatation of advanced degree he treats by gastro-enterostomy of which his first operation was performed in 1894. 5.—Robinson reports that the over lapping of the abdominal fascio-muscular apparatus like a double breasted coat and fixing them in situ with silver wire sutures is the most successful of all operations for splanchnoptosis.

Dr. Lucy Waite and he have practiced it in Mary Thompson Hospital for almost a year with the most gratifying success.

A CASE OF ENDOTHELIOMA OF THE UTERUS. By L. H. Prince, M. D., of Philadelpnia.

The lesion occurred in a woman of 60 years. The condition was recognized from a study of the debris of a thorough curettement. The earliest microscopic findings were of the nature of a pseudomembranous inflammation of the endometrium and because of these findings the curettement was performed and the condition mentioned discovered.

Operation was advised and successfully accomplished by Dr. Wilmer Krusen. The organs were found to be freely movable. No infiltration of any of the viscera could be recognized. The patient became infected, possibly from the suture material used, and died on the fourteenth day after the operation. The cause of death was peritonitis, gangrenous in character, and the bacterium found was the staphylococcus phyogenes albus. The kidneys showed some chronic interstitial change, together with acute engorgement. This possibly accounts for the casts and albumin observed during life and which occurred some days after operation. There was only a partial post mortem permitted. The uterus was carefully studies microscopically and two distinct types of neoplasm recognized. The one occupying the inner area of the uterus, is clearly an endothelioma, apparent from the character of the cells found together with their tubular arrangement. The features of this area were shown by drawings and the measurements and minuter details carefully considered in the original articles.

The second type consists of a papillary adenomatous growth quite typic in structure and arrangement. The evidence is clear that the two neoplasms do not transform one into the other, but remain distinct. Here again the details are omitted for want of space. Certain peculiar large cells are described as present in this region. They are considered as decidual cells persisting in this uterus until this late day.

The paper closes with a review of the literature on the subject of endothelioma of the uterus, in which is noted the rarity of this variety of neoplasm, together with the possibility of its occurring at any age, the ages ranging from 18 to 60 years.

THE SIGNIFICANCE OF THE TEMPERATURE in the Diagnosis of Extrauterine Pregnancy During the Period of Collapse From Hemorrhage. By Charles P. Noble, M. D., Philadelphia.

The following case was of special interest to me because of a doubtful diagnosis, and is reported to elicit discussin upon the point as to the value to be attached to a rise of temperature in a patient in collapse in deciding for or against a diagnosis of extrauterine pregnancy with rupture.

After reaction from collapse or faintness due to hemorrhage from ectopic pregnancy a rise of temperature is quite common, and is due to plastic peritioitis, which is a part of the process of walling off the blood clots from the general peritoneal cavity. With a history suggestive of ectopic pregnancy and a mass in Douglass' pouch, the presence or absence of a rise in temperature would not at all throw doubt upon a diagnosis of ectopic pregnancy with rupture. On the other hand, in all cases coming under observation, in which the patient was seen during primary collapse from hemorrhage, there was a subnormal temperature. This fact caused a question as to the diagnosis of the following case:

Mrs. R——, aged 34, has had two children and one miscarriage. She menstruated regularly and normally March 21, 1902. She missed the April period. A pelvic examination made about the middle of May by Dr. William E. Parke led him to think that uterine pregnancy existed. At that time there were no lateral masses felt. May 25th, about noon, after active exertion, the patient was seized with severe epigastric pain, faintness and vomiting. The pain and faintness continued throughout the day. A neighboring physician who was called in made a diagnosis of acute indigestion, and prescribed an anodyne. Dr. Parke saw her at 11:30 p. m. She was then pale with a pulse of 120, the skin cool, the mind clear and the abdomen distended, with tense abdominal walls. The vaginal examination was unsatisfactory, but no lateral masses were made out. I saw the patient in consultation about 1 a. m., when the condition was as described. The pelvic examination disclosed nothing abnormal, but was unsatisfactory because the patient was stout and the abdomen so distended that bimanual palpation was impracticable. The absence of menstruation, the apearance of the patient, the condition of the pulse and the persistence of faintness, were suggestive of hemorrhage from extrauterine pregnancy. On the other hand, no clots or fulness could be felt in Douglass' pouch, the pain had been epigastric in location, and the vaginal temperature was 100°, F.

Hypodermic stimulation and hypodermoclpsis were advised to promote reaction, and it was felt that if reaction were not prompt, a diagnosis of hemorrhage would be rendered more certain. The patient was left with the understanding that if reaction was not prompt and satisfactory, she was to be transferred to the Kensington Hospital for Women for operation. This was done exclude a diagnosis of collapse from hemorrhage.
the following morning, when the abdomen was promptly opened and found full of fluid and clotted blood due to ectopic pregnancy. The patient was so prostrated for some days that the outcome was in doubt, but she made a good recovery.

The case is reported as showing that a rise of temperature a few hours after the onset of symptoms of hemorrhage from ectopic pregnancy does not

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A COMPEND OF HUMAN PHYSIOLOGY, especially Adapted for the Use of Medical Students. By Albert P. Brubaker, A. M., M. D., Adjunct Professor of Physiology and Hygiene in the Jefferson Medical College, etc., etc. Eleventh Edition, Revised and Enlarged. With Illustrations and a Table of Physiologic Constants. Philadelphia: P. Blackiston's Son & Co., 1902. Price 80 cents.

Medical students will find this compend admirably suited to their needs.

The treatment espoused by the author of this little book is the outcome of the experience of thirty years in the study of the morphin disease.

Medical Miscellany.

THE GENERAL CONSIDERATION OF SURGICAL PATIENTS, was the topic discussed by A. J. Ochsner, of Chicago, at the meeting of the Mississippi Valley Medical Association, held in Kansas City Sept. 19, 1902. The paper involved a discussion of general considerations which have a bearing upon the success in the execution of clinical surgery. The author first calls attention to the fact that the same remedial measures do not always apply to two patients with the same pathological lesions. The patient himself must be thoroughly considered before applying remedies intended for his relief.

In the diagnosis of the patient certain measures are condemned such as prolonged and violent manipulations which may aggravate the local trouble or institute harmful matastasis.

The excision of sections of malignant growths for diagnostic purposes is condemned because of the danger of exciting metastasis and converting a condition which may be relieved by an early operation into a hopeless state.

The exploring syringe is said to be detrimental except in locating brain abcesses.

The exploring needle is also condemned and the practice of cathterization of the ureters is considered harmful.

The author argues for a general recognition of certain contraindications to operation such as old age, infancy, obesity, tuberculosis of the lungs, etc. The importance of the loss of blood during the operation and the amount of time spent at the operation are to be considered by the surgeon. The temperature of the operating room, the preparation of the patient and other conditions which are not directly connected with the operation, but which have a bearing upon the ultimate success, should come in for their full share of attention.

THE GOITER OF PUBERTY AND PREGNANCY AND ITS TREATMENT.

Dr. Wm. Culbertson, in the Chicago Medical Recorder says that goiter may be divided clinically into 1. Vascular. 2. Hypertrophic. 3. Cystic. 4. Pnumatic. 5. Malignant.

The goiter of puberty and pregnancy belong to the vascular and hypertrophic class. In the former the connective tissue is replaced by rapidly forming blood vessels. Such a tumor has the appearance of a telangiectasis or cavernous angioma.

Natalis Guillot appears to have been the first to call attention to a specific enlargement of the thyroid gland during pregnancy. Petit recognized the relation between disordered uterine functions and goiter.

Jenks reports fourteen cases of goiter occuring at the time of puberty, in each case there being coincident uterine disorders.

Lawson Tait believed that goiter and uterine disturbances were closely associated.

The author has collected 25 cases. All but two showed a marked diminution in haemoglobin. Two cases were goiters of pregnancy, twenty-three being goiters of puberty. The author attributes as the exciting cause in the production of these tumors, the blood changes which occur at the time of puberty and pregnancy. He thinks that uterine disorders play a small part in the etiology of goiter.

In the treatment of these cases the author recommends the administration of hydrastis canidensis, one and one-half grains of the dry extract t. i. d. after meals. In each of the twenty-five cases a cure was effected in from six weeks to three months.

AN ANTITOXIN FOR EXOPTHALMIC GOITER

has been employed by Schudtse (Munch. Med. Wochenchr.) made by Merck from the serum of sheep from which the thyroid gland had been removed.

Schultse tried antithyrodin in the case of a woman who had suffered from this disease for four years and who had become insane and had been removed to an asylum. Small doses of antithyroidin had no effect but when the dose was increased to five grames t. i. d. a marked improvement was shown. The mental excitement decreased and in thirty days the objective and subjective symptoms were almost wholly removed. The drug apparently reduced the pulse from 110 to 80, as, when discounting, it again became very rapid. No theory is advanced showing how this drug neutralizes the increased secretions of the thyroid gland.

A NEW TREATMENT FOR GONORRHEA

has been expolited by Dr. S. T. Rucker of Chatanooga, Tenn. (J. A. M. A., Oct. 11, 1902.) In addition to the usual directions regarding diet, rest and habits the author advocates the packing of the urethra with antiseptic oiled dressing. After the bladder has been emptied the urethra is irrigated with a hot solution of potassium permanganate, about 1 to 3,000. The packer is now introduced into the urethra containing antiseptic material. If the case is one in which the anterior urethra is alone affected, the instrument is introduced about four inches, while if it is a posterior affection it is introduced as far back as the neck of the bladder.

The urethra is packed with one inch continuous gauze strips or a loosely spun cotton cord. These materials are saturated wtih one of the following solutions:

R. Iodoform ....gr. xcv
Balsam of Peru ....ʒiv
Castor oil q. s. ad ....℥iv

Rub iodoform in castor oil, then add balsam of Peru. You will notice that the odor of iodoform is practically masked in this solution. Or:

R. Ichthyol
Resorcin, aa ....gr. xl
Balsam of Peru ....ʒiv
Castor oil q. s. ad ....℥iv
M. Ft. sol.

The patient is instructed to go as long as possible before urinating, when the cord is slowly removed. The average patient can go from 5 to 8 hours before urinating without much discomfort.

The urethra is packed once or twice a day in the acute cases when the discharge is copious and later once every other day.

The author states that in the considerable experience he has had with this treatment he has not encountered the not very uncommon complications of cystitis, orchitis, epididimitis or stricture.

THE INDICATIONS FOR THE MASTOID OPERATION.

Dr. Philip Hammond in a recent number of "American Medicine" sets forth conditions which he believes necessitate operative interference.

1. Mastoiditis always follows purulent inflammation of the middle ear. 2. Tenderness when present is an important symptom but the mastoid may be full of pus without producing this symptom. 3. The absence of temperature affords no guide. 4. Improvement of hearing is an indication that the middle ear trouble is subsiding. 5. Bulging of the canal wall is an important symptom. 6. The operation is safe, the delay may be dangerous.

OREGON STATE MEDICAL SOCIETY.

The new officers elected Sept. 11th, 1902, are as follows:

President, Dr. Henry Waldo Coe, Portland, Ore.; first vice president, Dr. F. W. Van Dyke, Grants Pass; second vice president, Dr. J. A. Geisendorfer, The Dalles; third vice president, Dr. J. P. Tamiesie, Hillsboro; secretary, Dr. A. D. Mackenzie, Portland; treasurer, Dr. Mae Cardwell; councilors, Dr. W. J. May, Baker City; Dr. J. Fulton, Astoria; Dr. Wm. Amos, Portland; Dr. G. F. Wilson, Portland; Dr. C. S. White, Gervais; Dr. S. T. Linklater, Hillsboro; Dr. W. T. Williams, Salem; Dr. Wm. House, Pendleton; Dr. Ellis, Portland; Dr. R. C. Coffey, Portland.

DR. LORENZ, PROFESSOR OF ORTHOPEDIC SURGERY in the University of Vienna recently operated upon Lorita Armour, daughter of Mr. and Mrs. J. Ogden Armour, Chicago, for congenital dislocation of the hip. Professor Lorenz has a record of one thousand operations of this kind, and has had remarkable success. He claims that 65 to 75 per cent. recover perfect function of the limb when the operation is performed before the age of five years.

Dr. Lorenz came to this country at the request of Mr. Armour to perform this operation, and it is said that his fee is $150,000. While in Chicago the doctor has performed several similar operations at the various clinics in the interest of science and only one accident has occurred, the fracture of the femur, and the tenth of the kind in one thousand cases. The result Dr. Lorenz said would not be complicated by the accident.

A NOTABLE IMPROVEMENT IN THE THERAPY OF TYPHOID FEVER. The recent discovery, by Duval and Bassett, of the presence of the bacillus dysenteriae (Shiga) in forty cases of infantile summer diarrhea, awakens renewed interest in the subject of intestinal antisepsis. But a few months have elapsed since Drs. P. C. Freer and F. G. Novy, of the University of Michigan, demonstrated the enormous germicidal power of benzoyl-acetyl-peroxide, more familiarly known as Acetozone. Although the preliminary reports of these investigators were of necessity based upon results of laboratory experiments, their expectations are already being realized in clinical work, in the treatment of typhoid fever, particularly.

In the city of Chicago, where a large number of cases of typhoid have been reported, Acetozone has been used exclusively in the treatment of 300 of them. The consensus of opinion is that it causes the temperature to decline earlier than usual in the course of the disease, and it ameliorates the mental and physical condition of the patient, in all probability by controlling the toxemia.

Two Chicago practitioners, I. A. Abt, M. D., and E. Lackner, M. D., have thus far reported (Therapeutic Gazette, October, 1902) forty cases of typhoid, in children, treated with Acetozone, with but two deaths, a mortality of 6 per cent. One of the patients that died succumbed to pneumonia and pulmonary edema, the other to great pyrexia on the fifth day. Stupor and tempanites were almost entirely absent in all the cases; the characteristic typhoid fever of the stools was markedly diminished, and the hemorrhage occurred but twice, and in the same case. The average duration of the febrile period, in 37 cases, after beginning Acetozone treatment, was 13½ days. The drug did not seem to act upon the heart or respiratory apparatus.

Early this year Eugene Wasdin, M. D., of the U. S. Marine hospital service, Buffalo, N. Y., reported 27 cases (American Medicine, Feb. 8, 1902), of typhoid fever, 24 of which were treated with Acetozone, all of the patients recovering. The writer says: "Its application in typhoid fever has been followed by very happy results; its use has been directed to the destruction of the germ in its primary lung colony and also in its secondary intestinal colony, and it has been used by hypodermoclysis to combat terminal expressions, with the result that in 24 cases the disease has been limited almost entirely to the expression of intoxication from the primary focus, the intestinal symptoms remaining entirely in abeyance, and the disease has been shorn of many of its most disagreeable features."

In a second paper, which appeared in the Therapeutic Gazette, for May 15, 1902, the same writer states that his patients were given from 1,500 to 2,000 Cc. of the aqueous solution of Acetozone daily. The diet was milk diluted with the same solution. The first influence of the drug is observed in the increased secretion of urine. That this is not due wholly to the ingestion of large quantities of water, necessitated by the use of the saturated solution is evident from the author's assertion that the same result was observed when Acetozone was administered in capsules. The second influence to which attention is directed is the very pronounced decrease of the odor of the stool, while plate cultures from the dejecta showed comparatively few germs.

The deodorant and diuretic effects of Acetozone were also observed by G. H. Westinghouse, M. D., of Buffalo, (Buffalo Medical Journal, August, 1902), who used it in seven cases. This observer remarks that with the increased flow of urine "a corresponding reduction of typhoid symptoms followed, and tympanites and delirium disappeared." It should be remarked that the diagnosis in all these cases, as well as in most of those reported by the Chicago physicians, was confirmed by Widal's reaction and Ehrlich's test, and in some a blood-count was resorted to. Westinghouse concludes his paper by saying that "Acetozone, as an intestinal antiseptic, is unequaled by anything I have ever employed. A complete subsidence of all the bowel symptoms followed in every case of typhoid within a few days after beginning its use. The application of the antiseptic consisted, in most cases, in simply allowing the patient to drink the saturated aqueous solution ad libitum; or, in other words, substituting this solution for all other liquids, and urging the patient to partake of it freely when the natural craving was not sufficient to insure the consumption of considerable quantities."

MEDICAL DIAL

A Monthly Record of Medicine and Surgery

Published by MEDICAL DIAL COMPANY

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Medical contributions respectfully solicited from Regular Physicians. The editor or publishers will not be responsible for the opinions expressed by correspondents. No attention paid to anonymous communications. Reprints furnished only at actual cost.

Entered in the Post Office at Minneapolis, Minnesota, as Second Class Matter.

SUBSCRIPTION PRICE

United States, Canada and Mexico, per annum, in advance,	$1.00
Foreign Countries in the Postal Union, per annum, in advance,	1.50

N. B. Matter for the reading pages should reach office of publication on the 20th of the preceding month and display advertising on the 25th, to insure attention.

VOL. IV MINNEAPOLIS, MINN., DECEMBER, 1902 No. 12

THE BOND PROPOSITION submitted to the voters of Minneapolis at the late election failed to receive the requisite number of votes, and therefore the city will be without funds, for the present, to make substantial and necessary improvements, and, also, to increase the school-room capacity to relieve the overcrowding of children as now endured. Some voted against the bonds, probably, for fear of increased taxes, many neglected to vote from indifference and inattention to the whole matter, and others voted adversely, being especially opposed to the experiment of building a filtering plant, not yet convinced that it will purify the water for any considerable time, and not become itself a prolific breeder of microbes and thus render the water more impure than when first taken from the river.

AT THE MEETING OF THE HENNEPIN COUNTY MEDICAL SOCIETY, Nov. 2, the following papers were read and discussed: Dr. C. A. Donaldson on cases of Diphtheria treated with Formaldehyde with marked benefit, Dr. W. P. Spring on X-Ray Therapeutics, with especial reference to malignant diseases. Many of these cases have been greatly relieved, the progress of disease arrested, and some cases of Lupus cured. Experience has proved that these rays are not always harmless to other tissues of the body, and there are now several complaints before the courts for damages against the operators of these Rays. It seems impossible to know before trial just what the result may be on the sound tissues involved with the malignant, or in the immediate vicinity; the damage does not always manifest itself at once. Dr. A. B. Cates read a paper on "Consultation."

THE MALTINE PRIZES. The two prizes of a thousand dollars and five hundred dollars which were offered by the Maltine Company last January for the two best essays on "Preventive Medicine" have been awarded by the judges, Dr. Lewis of New York, Dr. Reed of Cincinnati and Dr. Rhodes of Chicago, who met for a final consultation in Buffalo.

Two hundred and nine essays were submitted in competition, and although nearly every state in the Union was represented in the contest, both prizes were won by Philadelphia men.

The thousand dollar prize was awarded to Dr. W. Wayne Babcock, 3302 North Broad street, Philadelphia. His essay is entitled "The General Principles of Preventive Medicine" and was submitted under the nom-de-plume "Alexine."

The five hundred dollar prize was awarded to Dr. Lewis S. Somers, 3554 North Broad street, Philadelphia. His essay is entitled "The Medical Inspection of Schools—a Problem in Preventive Medicine" and was submitted under the nom-de-plume "Broad."

The two successful essays will first be published in representative medical journals, and then in permanent form by the Maltine Company for gratuitous distribution to the profession at large.

The following tabulation will undoubtedly prove of interest. It shows how the various sections of the country were represented in the competition:

Alaska	1
Arkansas	1
California	6
Colorado	4
Connecticut	5
District of Columbia	3
Florida	5
Georgia	5
Illinois	15
Indiana	11
Iowa	8
Kansas	2
Kentucky	3
Louisiana	2
Maine	4
Maryland	2
Massachusetts	12
Michigan	7
Minnesota	7
Mississippi	1
Missouri	5
Montana	2
Nebraska	2
New Hampshire	1
New Jersey	4
New York	22
North Carolina	1
Ohio	11
Oregon	1
Pennsylvania	25
Rhode Island	1
South Carolina	2
Tennessee	1
Texas	2
Vermont	1
Virginia	1
Washington	3
West Virginia	2
Wisconsin	10
Ontario	2
New Brunswick	1
Unidentified	5
	209

Medical Articles.

ADDRESS TO ST. BARNABAS HOSPITAL GRADUATING CLASS, by J. T. Moore, M. D., November 1, 1902.

We are told that in all important positions in life, the persons best adapted to fill them are born with the proper proclivities rather than prepared by artificial means. No doubt much truth is contained in this axiom and yet with all the qualifications of a birthright, certain training and education is necessary to bring out the best natural qualifications and enable their possessor to utilize them to the best advantage. Probably in no profession is this more true than that of nurses, unless it be the physician who is so closely related in his labors. The necessity for proper training for nurses has been recognized alike by physicians and hospital boards, and hence, a proper adjunct to every hospital of any pretentions is a well managed training department for nurses. In return for the inducements thus offered, many young women have offered their services at the shrine of duty, and the result is that the educated and equipped nurse is being recognized as a necessary part of the armanentarium for fighting with disease and injury. Many of you may not follow the vocation through life, others of you will probably finish your vocation only, when called to a happy reward.

To those who marry, however, what you learn in this training will be to you and those about you of incalculable benefit. You will learn that which you could acquire in no other school and there will be times when your families and friends will bless the days you spent in this training.

Text-books we have in plenty, but books will not teach the practical lessons, not only of brain, but hands which you have learned during your years of probation within these walls.

Of all the professions, Medicine easily takes the lead. Theology makes a good second, and law is not in it. The devotees of the healing art, usher us onto this mundane sphere, while the Theologian ushers us through to the next.

The responsibilities of the nurse are so closely linked with those of the physician that it is impossible to draw a line of separation in their duties. With your training, in the care of the sick, you necessarily must become conversant with the application of remedies for relief of suffering.

We are told that Greek slaves carried the healing art to Rome, and soon medical schools began to develop in Italy, of which the school of Salerno was the most important. It is here that history first recognizes the acquisition of women to the Medical profession.

In all divisions of medical science, nursing is pre-eminently the domain of women. What higher calling can be sought than care of the sick and injured, to relieve pain and soothe the fevered brow?

Your course of training has been second to none. For three years you have diligently pursued your duties as directed under a well trained chief, besides the lectures you have listened to from various members of the staff. Method has grown out of chaos and you have learned the lessons of discipline which will be of incalculable importance to you when you go out singly to your life's duties. True, you will use that knowledge with gentleness, rather leading intractable patients in the proper way than exerting authority over them. You have been exceedingly fortunate that your course of training was during a period in which all the branches of medicine and surgery have made such wonderful advances. We are living in an era of unprecedented progress in all the arts and sciences. From this rich harvest of knowledge you have been able to garner your sheaves in such a way as to bear the light of closest investigation as evidenced by your accurate knowledge brought out in examinations. Remember, however, there is still a great ocean of undiscovered truths, which should prove the boundaries of human knowledge and extend the intellectual kingdom of man. Your education must not cease when you leave the school of training, but let it continue through life. Your gradual accumulating experience will but add a golden crown in your advancing years. Your duties, as well as those of your physician have for their end the common good of mankind, who knows nothing of national or sectional enmities, of political strife or sectarian dissentions. Your duties must be extended alike, without stint or scruple, to men and women of every nationality and party, to every rank and religion.

When there is suffering you must be at your post, be it on the blood streaming field of battle, or in the midst of half-deserted, plague stricken cities; the honor of your calling gives you no alternative, you must stay at your post, even unto death. How gloriously was this depicted within the past four years, when women offered their services and traveled half around the globe to South Africa, The Philippines and nearer home, in little Cuba. How many braved the dangers of the battle field and attending the ambulance corps, labored shoulder to shoulder with the physicians for the relief of the wounded; and again in camps and hospitals where epidemics of infectious diseases were claiming victims by the score. To read of those brave nurses is enough to stir the blood in our veins and cause us to strive to emulate their noble deeds.

In your duties, though they be restricted to private life, remember always the nervous condition of your patient: few diseases, but are accompanied by mental depression and nervous irritation. Always look upon the bright side, be cheerful and thus lead your patient out of the slough of despondency—preserve the poor afflicted one from a long-faced querulous nurse, who revels in yarns of death-bed scenes and fearfully dangerous cases she has nursed. Don't look for faults in your patients. It is wiser to admire than criticise. Always be patient, especially with nervous patients and children.

In nine cases out of ten, they are fractious because of suffering. If we could only look into their minds, we would be sorry for them rather than criticise them. One kind word, one little sympathetic touch and behold the magic effect. And when we have performed the duties devolving upon us, we feel a certain happiness in reflecting upon them as being our best efforts.

Sir John Lubbock says, "We certainly need have no fear if we have done our best to make others happy; to promote peace upon earth and good will amongst men. Nothing can do more to release us from the cares of this world, which consume so much of our time and embitter so much of our life. When we have done our best we may calmly await the result in peace. At any rate if we have not effected all we wished, we shall have influenced ourselves. True we are hampered by the conventionalities of our environment and we sometimes think how delightful it would be to be quite free. Ruskin says a fish is freer than a man and a fly is a black incarnation of freedom. Yet with them we would not exchange.

Self-control, however difficult at first, becomes step by step, easier and more delightful. We possess a mysterious dual nature; there are fewer, truer triumphs, or more delightful sensations than to have ourselves under thorough self-command.

To rule ones self is in reality the greatest triumph. "He who is his own monarch," says Sir T. Brown, "sways the sceptre of himself." Those are really highest who are nearest heaven. No one really fails who does her best, but gains the success which is the quest of all.

We must not be discouraged if success be slow in coming, nor puffed up if it comes quickly. We are not all constituted alike and some may have more natural ability or more business acumen than others. Keep watch of your class mates, and if you can help a sister, be ever ready and faithful in performing your duty—we have already depicted the pleasure which comes from such deeds of kindness.

To those who continue and lay their lives upon the altar for humanity's sake—who pass through days of toil and care, through long vigils by night, ever on the alert for the suffering ones' comfort and welfare—there will come a recompense far above any financial valuation, more to be prized than emeralds, sapphires or rubies, a sense of duty well performed, which carries with it virtue's own reward, a realization of a life spent, as was taught by the great Master to make others happy, so far as possible; and when the last parched lips have been moistened, the last fevered brow soothed and your turn comes to travel over the mountain toward the setting sun through whose last glinting rays you may see the rosy dawn ushering into a larger and brighted morning, then you may lie down like tired children and say, "O death where is thy sting? O grave where is thy victory?"

STRABISMUS, OR SQUINT. By W. H. Cooke, M. D., Minneapolis. Minn.

In the normal state the eyes are in perfect muscular equilibrium in every natural—i. e.,—not forced position.

Strabismus and paralysis of the occular muscles are disturbances of equilibrium. The disturbances of muscular equilibrium may be manifest or latent. Latent disturbances of equilibrium are due to an excess or enfeeblement of convergence. The causes are organic and functional.

Organic—consisting of feebleness of one of the pairs of muscles—depending on the size of the muscle and the way in which it is inserted, the size of the eyeball and the distance of the eyes from each other, e. g. Myopic eyes are large, and difficult to move. Disease, as paralysis, may weaken the eye muscles.

Functional—Consisting of abnormal

innervation of the occular muscles arising from the relation existing between accommodation and convergence, e. g., a myope whose far point is at thirty centimetres needs no accommodation at all to see an object at this distance distinctly, hence the necessary impulse for the requisite degree of convergence is wanting, because with the accommodation at rest the eyes stand to arrange themselves parallel to each other and in this case a latent divergence will exist. In the case of a hypermetrope the reverse is the case, in order for the hypermetrope to see an object distinctly at thirty centimetres he must accommodate more than an emmetrope or person with a normal eye, hence is led to innervate the muscles of convergence excessively so that a latent convergence is set up. Slight degrees of latent disturbances of muscular equilibrium give no trouble but the higher degrees cause tiring of the eyes (asthenopia) and squint (strabismus). When the eyes get tired easily, when the object looked at grows indistinct and often appears double, followed by headache and nausea we have a condition of asthenopia, which may be muscular or nervous. A muscular asthenopia is characterized by the fact that the above symptoms disappear at once if the patient closes one eye and uses but one for fixation, since then no convergence is required.

These latent disturbances of muscular equilibrium are known as heterophoria and for convenience of study are called esophoria, exophoria and hypophoria. The symptoms of heterophoria are diplopia or double vision, asthenopia and headache, reflex pains, vertigo, confusion and dulness and in some cases causing nausea and digestive disturbances.

Strabismus or squint consists in a deviation of the visual axis of one of the eyes from the correct position of fixation upon an object, the deviation occurring in every direction in which the eyes are turned and always through the same angle. Since the tendency of all latent disturbance of muscular equilibrium (heterophoria) is to become manifest i. e. develop into squint, hence the importance of examining or thoroughly testing the muscles of the eyes of all patients complaining of the above symptoms and fully correcting the muscular weakness as well as any error of refraction. The causes of Strabismus then shortly are, 1st a diminution of the visual power of one of the eyes (due to errors of refraction, in one eye alone or of higher power in one eye than the other, or there may be a slight congenital amblyopia, opacities in the refractive media, particularly the cornea and lense, intraoccular diseases).

2d. A pre-existing disturbance of muscular equilibrium.

Strabismus for convenience of study is divided into strabismus convergence and s. divergence.

Convergent strabismus may be divided as follows: Periodic, constant, alternating, intermittent (and paralytic) which we will not consider in this paper. Convergent strabismus develops at an age when accurate and long maintained fixation demands a great effort of accommodation i. e., at the age from two to six. Usually first noticed when near objects are looked at (periodic squint) and this may remain the case during the whole life, but generally a constant strabismus develops from the periodic, a squint soon making its appearance when the gaze is fixed on distant objects. It occasionally happens that children lose their squint at the age of fourteen to eighteen, but are left with sight permanently weakened.

In strabismus alternans both eyes have good visual acuity but unequal refraction—e. g., one may be far sighted, the other near sighted. The one used for fixing near objects the other for distance. Contrary to the rule some short sighted persons squint inward. This squint does not develop in childhood but later on in life and is often accompanied with a troublesome diplopia.

Intermittent strabismus makes its appearance without known cause. It develops quite suddenly and disappears as suddenly and returns at regular intervals (e. g. every other day) is directed inwards and is almost exclusively observed in children and is probably referable to nervous disturbances.

Strabismus Divergence—in these patients about two-thirds are myopic. The cause lies in the fact that the myope in order to see objects near by needs little or no accommodation, hence convergence impulse too weak. Also size of eye and unequal visual power. This form of strabismus develops during youth at the time myopia develops, as the myopia increases the strain on the accommodation and consequently on convergence decreases, while demand on the convergence increases owing to approximation of the near point and this ultimately leads to a divergent squint for near objects, many myopes remain during their whole life in this condition of periodic strabismus, in others a constant divergent strabismus develops and one eye deviates out in looking at distant objects. In this form of strabismus a spontaneous cure never occurs, but on the contrary it tends to increase with age.

In many persons during fixation the eyes are properly placed, but when looking about without any definite object, one of the eyes turns out. We sometimes get a deviation of the eyes up or down. These cases are generally associated with strabismus convergence and are relieved when the strabismus convergence is relieved by a tenotomy.

Prognosis of Strabismus is favorable in all cases if treated properly and at the proper time. If neglected the patient develops an amblyopia exanopsea loss of vision or nearly so in squinting eye also nystagmus, to say nothing of the deformity.

TREATMENT.

First. Of children should be commenced as soon as child begins to squint and be such as to make the squinting eye fix until child old enough to wear glasses—say four years old. The refraction should be carefully and thoroughly worked out, (the eye being under a cycloplegic) and glasses given to correct error of refraction to be worn constantly until age of ten. If then there is good binocular vision and eye getting straighter, the proper glasses should be worn until patient is sixteen. If the squint is not fully corrected, operate.

Second. In adults who complain of the symptoms of asthenopia the muscles and refraction should be thoroughly tested. If possible correct any want of muscular equilibrium by prisms, build up neurasthenics by tonics and exercise. Errors of refraction properly corrected by glasses. If these fail then operate. Strabismus divergence is only successfully treated by an operation. In my opinion only those who have given much study and thought to this subject should be trusted the treatment of so complex and so delicately constructed an organ as the eye. And if I may be allowed to sound a warning note, it is, this, that it is the duty of the general practitioner of medicine to educate his clientele so that the parents of children suffering from squint will see to it that their eyes are treated in time by a competent occulist and not by so-called traveling opticians who know little about refraction and much less about the muscles of the eye. If a child with squint is not treated in time the vision of the eye will be diminished and after a time entirely lost. Then there is the deformity, the headache, the injury to patient's health, etc.

SPECIFIC REMEDIES AGAINST INFLUENZA. By Dr. A. Weiss.

To determine the value of a specific against an infectious disease is an extremely difficult task. The reason for this is that many acute infections run their course in a more or less atypical manner, different persons being affected in a different degree, and therefore presenting variable a symptomatology. On the other hand, it must be remembered that the poison of the infection finally becomes exhausted, and the natural resistance power of the organism gains the upper hand.

For this reason it is extremely difficult to decide as to the specific action of a remedy particularly in certain infections, such as typhoid fever and especially influenza. There is perhaps no disease which assumes so protean an aspect as influenza. In this disease we have to consider not only the nature of the epidemic itself, but also the special disposition of the different individuals, and besides these, all those factors which usually play a part in the course of infections, such as the condition of the heart and vessels, alcoholism, syphilis, etc.

In a recent work, entitled "Can Influenza and its Severe Complications be Aborted?" Dr. S. Fuerst gives the following definition as to what is meant by aborting the disease. "1. To diminish the severity of influenza to such an extent that it does not overstep the border line of a light febrile condition accompanied with moderate catarrhal manifestations. 2. To prevent the occurrence of pneumonia, the severest of all influenza complications, which often carries away even young and vigorous persons within a short time." This definition is probably correct in a general way, and I think that it offers to us a certain basis of comparison as to the relative value of different remedies suggested for the treatment of influenza. Aside from the above requirements such a remedy must be free from toxic by-effects, and especially from injurious action upon the heart and kidneys.

On reviewing the various drugs recommended for the cure of influenza, they may be divided into three classes. First, the antipyrine group; second, the phenacetin group; and third, the salicylic acid group. Judging from my own experience extending over 40 years I feel justified in asserting that the first and second groups contain medicaments which have a more or less toxic effect, or, at least, under certain circumstances. This is a very important point to every practitioner, and especially deserves consideration in estimating the value of a remedy for influenza. While the literature contains a number of reports on the toxic effects of the first two groups such effects, as far as I know, have not been recorded in respect to the third group. I do not regard the tinnitus observed after the administration of large doses of the salicylates as among sequelae of dangerous character, since this symptom subsides quite rapidly.

For these reasons in the last few influenza epidemics I have been led to give my preference to the members of the third group, and have made extensive use of salipyrin. Although fully appreciating the prompt and reliable action of this remedy, I have repeatedly met with cases in which the drug was not well tolerated or in which it injuriously affected the heart and therefore had to be discontinued. Hence I have avoided the drugs belonging to the antipyrine and phenacetin group as much as possible and have resorted more extensively to salicylic acid and salophen, and especially in the influenza of children I formerly prescribed only the salicylate of sodium. There is one very objectionable feature of this drug, however, preventing its constant use, and that is the fact that it is not well tolerated by the stomach. On this account I was much interested in the addition of aspirin to the salcylic acid group, and gave the drug a very extensive trial during the influenza epidemic prevailing at that time. From my observations I report the following cases:

Case I. E. L., 16 years old, had gone through a severe attack of scarlatina the previous year. Her symptoms consisted of fever up to 39° C., pains in the limbs, headache, but no respiratory manifestations. She received daily doses of 30 to 40 grains of aspirin in single doses of 8 grains. On the third day the fever had completely subsided, on the fifth she was able to leave her bed, and on the eighth day could go outdoors.

Case II. Governess of the previous patient was attacked with severe pains in the sacral region with a fever up to 40° C. at night. A single dose of 15 grains of aspirin was given, and the drug continued in doses of four times and then three times daily. Within four days the infection had run its course, and on the fifth day convalescence had set in. During the first two days there was a slight delirious condition accompanying the high fever.

Case III. Mrs. Sch. was attacked with severe headache up to 39° C. and presented symptoms of an acute laryngitis. Aspirin, 15 grains, four times daily, was administered. At the end of three days the fever had subsided, but the laryngeal catarrh persisted for a time, requiring other treatment.

Case IV. This case presented a remarkable course. There was no fever but pains in both knee-joints and ankles, and especially in the soles of the feet; no perceptible swellings were noticed except that one ankle was somewhat puffed. She also complained of general weakness and loss of appetite. The case appeared to me to resemble the condition described by the French as herpetism. After experience had shown that large doses of the salicylates were not well tolerated recourse was had to aspirin in doses of 50 to 60 grains daily. In about eight days all the existing symptoms had disappeared.

Case V. A child, two years old, was affected with acute bronchitis. An infusion of senega was prescribed, to which aspirin was added in small doses at the time of taking. This combination was well borne and recovery ensued in less than a week. Previously I had administered the salicylates in the same manner.

Case VI. Mrs. A. G. had passed through a severe attack of articular rheumatism two years before. She had been saturated, so to speak, with the salicylates and was much frightened when again attacked with fever and pains in the joints. Aspirin in 15 grain doses, three times daily, effected a complete cure in three days.

Case VII. Mrs. G. suffered with bronchitis and high fever, and was treated in the same manner as the previous case. Although she had a tendency to diarrhea no signs of intestinal irritation were noticed during the use of aspirin, and recovery occurred in the course of a week.

Case VIII. Mr. P. H. complained of an intense headache, pains in the joints, and fever of 40° C. During four days he received aspirin in doses of 15 grains, three times daily, and was entirely restored to health at the end of the fifth day.

Case IX. presented the ordinary symptoms of influenza without any localization to any particular organ. The temperature was below 39° C. In this case aspirin was well tolerated and a cure obtained in four days.

Case X. Mr. B. had slight febrile symptoms, felt depressed, and complained of severe pains in the back. For the first two doses he received salophen, and then aspirin, and on the sixth day was able to return to his occupation.

In other typical cases of influenza the results were similar, so that I have not regarded it necessary to place them on record. It is of importance that not in a single instance was I compelled to resort to cardiac stimulants during the use of aspirin. As far as we are able to speak of the specific remedies against influenza I would count aspirin among this number. Die Heilkunde.

BUBONIC PLAGUE IN SAN FRANCISCO. There is no doubt as to the alarming prevalence of this disease in the city nor as to the means taken to conceal the facts. The national conference of the state and provincial boards of health of North America, held recently in New Haven, Conn., took the matter up and passed the following preamble and resolutions:

"Whereas, Bubonic plague has been present in California since March, 1900, information as to the extent of the disease being withheld by the local authorities, no effective measures of restriction having been put in operation, and the history of the outbreak, so far as we can ascertain from authoritative sources being as follows—showing that 88 cases have been recorded since March 6, 1900, and 15 of this number since Sept. 9, 1902, with the rumor that many others have occurred and not reported, and whereas, Thirty of these cases have occurred since July 13, 1902 no information as to their origin or exact location having been furnished, no effective steps having been taken to restrict the spread of the disease, the city board of health of San Francisco being helpless, and the *mala fides* of the state board of health of California having been fully established by the history of the outbreak, supported by documentary evidence in possession of this conference; therefore be it resolved, That the conference of state and provincial boards of health of North America views with observence the irretrieveable disgrace of the present state board of health of California, and pronounce the plague situation in California a matter of grave national concern; and be it further resolved, That the national conference of state and provincial boards of health of North America does hereby advise the various state boards of health of the United States to consider the propriety of calling upon the surgeon-general of the United States public health and marine hospital service to arrange at the earliest possible date a joint conference for the purpose of eradicating the plague from the United States."

THE PHYSICIAN'S POCKET ACCOUNT BOOK, consisting of a manila-bound book of 208 pages and a leather case. By J. J. Taylor, M. D. Price, $1.00 complete. Subsequent books to fill the case 40 cents each, or 3 for $1.00. Published by The Medical Council, Twelfth and Walnut streets, Philadelphia.

This very convenient account book fills all the legal requirements, and requiries no complicated bookkeeping.

THE PHYSICIAN'S VISITING LIST (Lindsay & Blakiston's), for 1903. Fifty-second year of its publication. Philadelphia: P. Blakiston's Son & Co., successors to Lindsay & Blakiston. Sold by all booksellers and druggists. Price $1.00.

This old stand-by is as well arranged as its predecessors, and is just as popular.

CLINIC REPORTS, by L. Lima. An interesting clinic was given by Dr. Sweetser at St. Mary's hospital, Nov. 14th.

The operating room of this hospital presents, from a student's standpoint, an excellent opportunity to watch the successive steps of an operation on account of the simple, yet unique, arrangement of seats.

The first case was that of a boy, aged 18, having cleft palate. The patient was anesthetized and placed on the operating table, the head somewhat lower to prevent the entrance of blood into the trachea. A mouth-gag was inserted and the edges of the cleft seized by forceps and pared up to the angle, while an assistant sponged the blood. The working in this region interfered very much with the administration of the anesthetic, which had to be given at intervals. To bring the edges into opposition and to prevent stretching, an incision was made on either side and parallel with the cleft, along the inner border of the alveoli, and the intervening tissue lifted up, the tensor palate muscle cut internal to the hamular process, and the whole mass drawn towards the median line, completing the coaptation of the edges. The profuse hemorrhage was promptly stanched by packing of gauze. Three silver wires, re-enforced by horsehair, were used as sutures and carried, by means of a short, curved Hagedorn needle, through the tissue a little distance from the raw edges. After the completion of the operation the palate presented a very natural appearance.

The second case was an infant deformed with club-foot (talipes equino-varus). The chloroform having been administered, a tenotomy-knife was inserted anterior to the tendo-Achillis, which was cut by a sawing motion. By manipulation the foot was abducted and brought into an overcorrected position and held thus by an assistant, while a plaster of Paris bandage was put on, extending from the toes to the knee.

The third case was a young man who had suffered a compound fracture of the upper third of the femur in a railroad accident. The jagged proximal end of the bone projected through the lacerated muscles and skin on the outer side of the thigh. The medulla and much of the muscular tissue presented an unhealthy appearance and gangrene had developed in the lower part of the leg. Amputation at the hip-joint was decided upon. With the patient anesthetized, the limb, below the wound, was swathed in moist antiseptic dressing and enveloped in oilcloth. The surface all about the wound was thoroughly cleansed and the wound cavity swabbed out with pure carbolic acid, this being afterwards neutralized by alcohol. In pursuance of Wyeth's method, a steel mattress needle was passed vertically through the tissues, just below the anterior superior iliac spine, and another needle through the abductor muscles, internal to the saphenous opening, and a tourniquet stretched several time around the thigh, above the needles, to inhibit circulation below. The intact skin on the inner side was utilized as flap and the knife carried through a little above the middle of the thigh, separating the portion of the limb below the fracture. All blood vessels were secured and tied, the nerve-trunks cut, and the tourniquet slowly loosened and removed. The muscles were drawn away from the end of the bone by a piece of gauze and the jagged projection of the femur sawn off.

A longitudinal incision was made on the outer side of the stump, over the great trochanter and through the lacerated tissue to the bone. Having lost the leg as a leverage, forceps were used on the stump of bone to dislodge it after all muscular attachments and the capsular ligament had been severed. Hemorrhage was slight and the capillary oozing was checked by irrigating the part with warm sterile water. A drainage tube wrapped in iodoform gauze was inserted into the acetabulum, the tissues trimmed, and the flap folded and sutured, forming a short muscular stump which was covered by bandages.

During the operation the effect of the anesthetic was most carefully watched and strychnine and a subcutaneous injection of two quarts of normal saline solution administered to increase the action of the heart.

Regardless of the severe injury sustained and the low condition of the patient when placed on the operating table, he recuperated gradually.

Nov. 24th. The patient is constantly improving, temperature being 100 degrees in the evening and 99 degrees in the morning, pulse ranging from 110 to 120. Appetite is very good.

THOMAS R. BROWN and Howard Kelley, after using a combination of nitrous oxide and ether for 200 anesthetic cases, strongly recommend it to the public.

A PRACTICAL WAY of tying the umbilical cord is to apply an artery forcepts near the umbilicus, tightly clasped for a few minutes. Then the instrument is removed and a ligature applied in the deep groove of hard semi-transparent tissue. In this way the danger of slipping of the ligature is reduced to a minimum.

THERE ARE ABOUT 2,500 HOSPITALS in the United States, which give employment to 65,000 people and pay over $23,000,000 in salaries. They have 300,000 beds and employ 37,000 physicians, and treat over 1,000,000 patients a year.

IT IS STATED that Prof. Frederick G. Novey, of the University of Michigan, is to go to India at the request of the British government to conduct experiments with his new intestinal antiseptic acetozone (benzoyl-acetyl-peroxid) in the treatment of cholera and the plague.

ACCORDING TO RECENT FIGURES the urban resident has a decided advantage over his rural brother, is regard to longevity. The average age reached in the city is 38.2 years, while that reached in the country is 31.1. The fresh air of the country is evidently more than offset by the better sanitation and food conditions of the city.

CLAY-BECKER MEDICAL SOCIETY. The physicians of Clay and Becker counties met at Moorhead, Oct. 23, and organized a medical society under charter from the State Medical Society. The following officers were elected: President, Dr. Frank H. Alexander, Barnesville; vice-president, Dr. Lenard C. Weeks, Detroit; and secretary and treasurer, Dr. Leon W. Hyde, Moorhead.

PARK REGION DISTRICT AND COUNTY MEDICAL SOCIETY. A large number of physicians met at Fergus Falls on October 22 to organize this society.

All physicians who practice non-sectarian medicine are eligible to membership. Wilkin, Grant, Douglass and Otter Tail counties were included in the territory. The following officers were elected: President, Dr. Thomas N. McLean, Fergus Falls; vice-president, Dr. John Livingston, Pelican Rapids; secretary, Dr. E. H. Hensel, Alexandria; treasurer, Dr. Walter E. Truax, Breckenridge.

DR. LYDSTON, OF CHICAGO, believes there is harm in the indiscriminate use of water in large quantities. His views, briefly stated, are as follows:

1. The nutritive value of the blood is often impaired, a relative hydremia being produced by the too free ingestion of water.

2. Disturbances of the circulatory and nervous systems are frequently caused by it. So-called weak heart, palpitation, nervous irritability, and exhaustion on exertion are some of the results.

3. Serious digestive disturbance, involving impairment of the secretion and composition of the gastro-intestinal juices and gastro-motor insufficiency are often produced by the too indiscriminate use of water.

4. Renal water habit may insue, in which case the kidneys become sluggist, unless they receive constant stimulation by the drinking of large quantities of water.

5. Acute and chronic inflammatory conditions of the kidneys are often aggravated by the ingestion of large quantities of water, which overwork the kidneys.

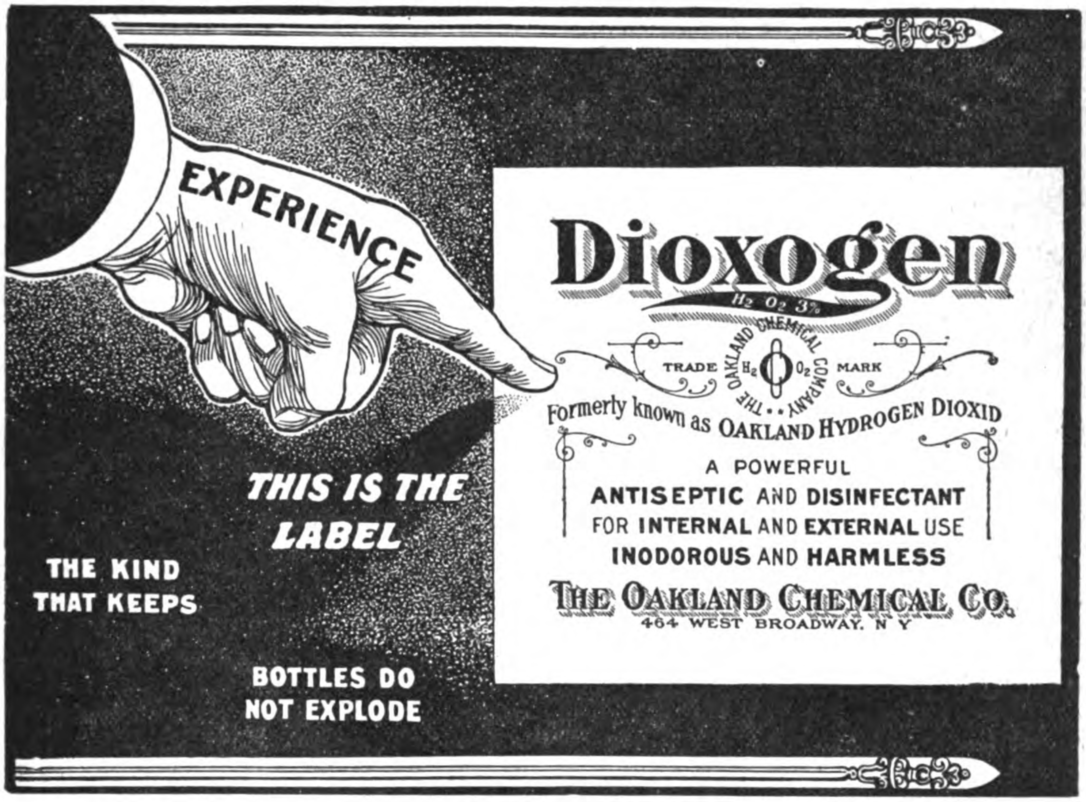
6. Inflammatory conditions of the lower portion of the genito-urinary tract are often deleteriously influenced by the frequent micturations resulting from the copious ingestion of water.

TREATMENT OF SPRAINS BY DRY HOT AIR is discussed by C. E. Skinner (Jour. Advanced Ther.) in which these conclusions are drawn: 1. The rapidity of repair exceeds that of any agent known and the detrimental systemic effects induced by confinement to bed or house avoided. 2. Immediate relief of pain which can be made permanent by repeating the treatments as often as the indications demand. 3. Satisfactory after effects, no matter how frequently applied.

FORCED FEEDING in Consumptives and in Normal Individuals is a subject dealt with by Bardswell, Goodbody and Chapman (British Medical Journal, Feb. 22, 1902). Researches were made at Brompton Hospital. The conclusion is that indiscriminate stuffing of tuberculosis patients must give way to systematic diet based upon the activity, and extent of the disease, digestive capacity, and the preference of the patient.

The onset of dyspepsia nearly always dates from the beginning of metabolic derangement.

Notwithstanding the unfavorable symptoms produced it is certain that forced feeding continues to agument the body weight. The result of forced feeding in the normal individual is an increase of the excretion of nitrogen, diminished absorption of fat and a rapid gain in weight. These conditions, however, are associated with an impairment of the general health, the symptoms of which include anorhexia, dyspepsia, drowsiness, abdominal discomfort and diarrhea. These symptoms are different from those seen in consumptives under forced feeding during the early stages of the disease, but coincide with those encountered when the patient regains his lost weight.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IN NEOFERRUM we have the maltopeptonates of iron and of manganese, which have proved to be the most rapidly assimilable forms of these agents, with a minute quantity of arsenic, so combined with the well known nutritive and digestive properties of Maltine and the gently stimulating action of sherry wine as to produce the most elegant and palatable preparation of iron yet offered the medical profession.

Neoferrum is slightly laxative in its action, theretore never constipates, it blackens the feces but not the teeth; and in a large number of clinical tests made during the past year has proven to act more rapidly in restoring the hæmapoietic functions than any form of iron previously employed.

It is pleasant in taste and appearance and causes no gastric irritation even in the most delicate patients. It is not affected by alkalies, and by weak acids but slightly and then only after long exposure to their influence.

EXCESSIVE PROTEID DIET. It doesn't require much of an argument to show that good material must go into the twenty-story building if it is to be solid and secure.

Yet a great many people seem to think that it matters little what kind of material goes into the building of the human structure!

They offer the body thistles and ask it to give back figs.

They feed on thorns and expect to pick roses.

Later, they find they have sown indigestion and are reaping ptomaines.

It's a wonderful laboratory, this human body. But it can't prevent the formation of deadly poisons within its very being.

Indeed, the alimentary tract may be regarded as one great laboratory for the manufacture of dangerous substances. "Biliousness" is a forcible illustration of the formation and the absorption of poisons, due largely to an excessive proteid diet. The nervous symptoms of the dyspeptic are often but the physiological demonstrations of putrefactive alkaloids.

Appreciating the importance of the command, "Keep the Bowels Open," The Antikamnia Chemical Company offers Laxative Antikamnia & Quinine tablets, the laxative dose of which is one or two tablets, every two or three hours, as indicated. When a cathartic is desired, administer the Laxative Antikamnia & Quinine Tablets as directed and follow with a saline draught the next morning, before breakfast. This will hasten peristaltic action and assist in removing, at once, the accumulated fecal matter.

THE PARSON OF NUGGET CAMP.

By Roger T. Howell, in Silver City (N. M.) Enterprise.

I was making an effort to plant the spirit of Christianity among the miners of a far western territory and one bright spring morning entered Nugget Camp. Addressing myself to an old man washing for gold in the creek, I told him my object and asked if the inhabitants of the place would be likely to give me a hearing.

"Reckon not, parson," he said. "We had a man along here on the same business a year ago."

"Tell me about it."

"It was jist sech a mornin' as this when a man walked into this place an' said he was a parson. He was not a straitlaced, long faced duffer, but one of them ginoine, sympathizin' sort of fellers, cal'c'lated to take right hold of a camp like this. The first thing he done was to sit down to a game of poker with the boys, an' it wasn't long afore he cleaned 'em all out. Then he set up the liquor fur the gang an' drunk one stiff horn hisself.

"'Now, boys,' he said, 'sence I've shown you that I'm no whinin', long haired, snivilin' evangelist, but one of your own kind, I think pa'a'aps you'll pay some attention to what I say. I've mined an' struck it big, an' mined an' mighty near starved. I've gambled an' soaked an' done a heap of ornery things too numerous to mention. Then one day I struck it bigger'n I ever done afore. I got what's wuth more'n all the gold in these yere mountings—religion. Sence that time I've wanted other people to enjoy my find, an' I want to give

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MEDICAL DIAL

A Monthly Record of Medicine and Surgery

Vol. IV
No. 12.
MINNEAPOLIS, DECEMBER 1, 1902
$1.00 Per Annum
10c. Per Copy

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Colden's Liquid Beef Tonic supplies nutriment in a form eagerly accepted by the depressed vital organs. Blood is enriched, tissue formed, nerves strengthened, the whole system invigorated. It helps the patient out of debility into healthful activity. Be sure to specify definitely to insure the patient's getting the genuine Colden's Liquid Beef Tonic. Sold by druggists generally.

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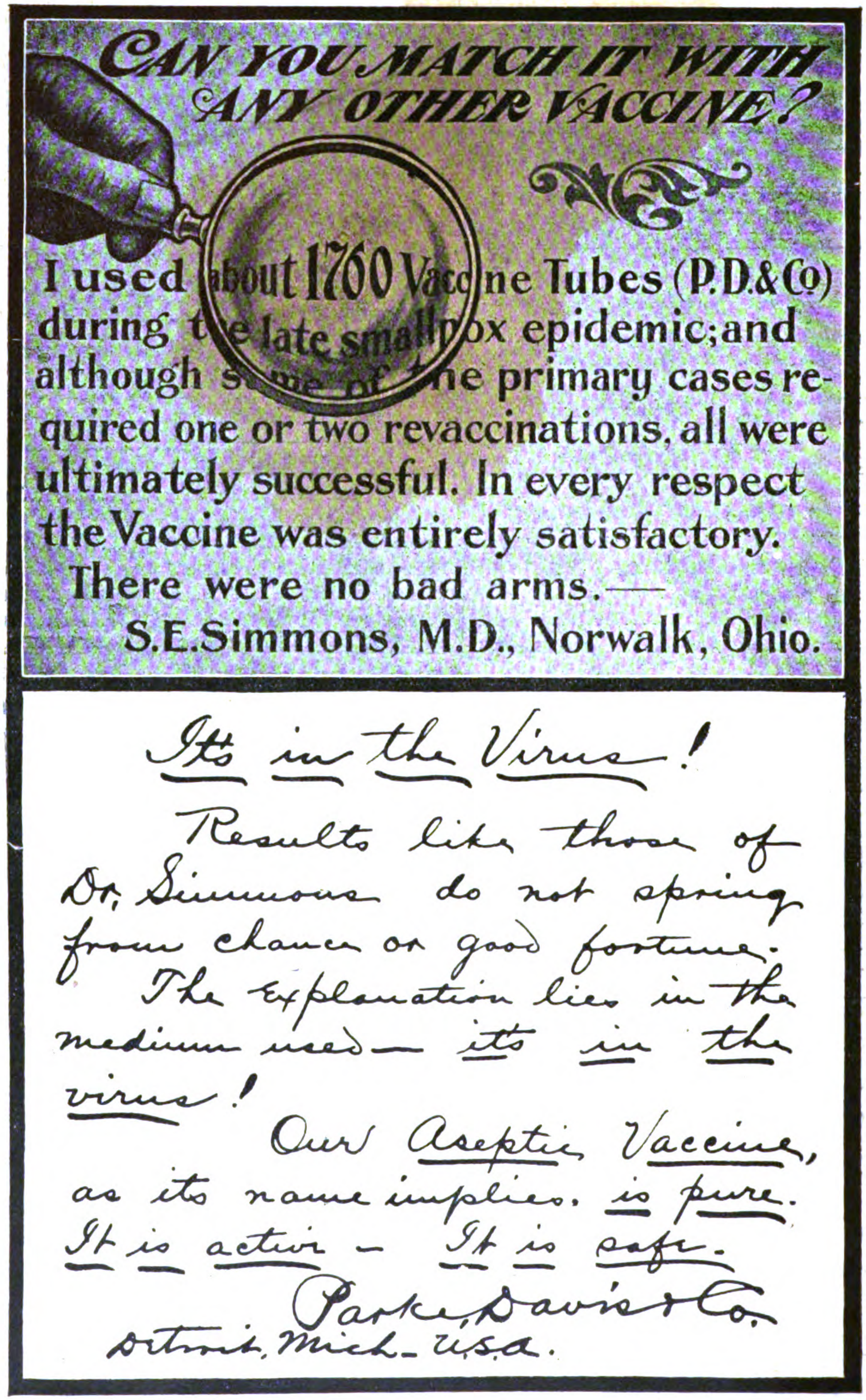
THE CHARLES N. CRITTENTON CO.
SOLE AGENTS FOR THE UNITED STATES
115-117 FULTON STREET, NEW YORK



CAN YOU MATCH IT WITH ANY OTHER VACCINE?

I used about 1760 Vaccine Tubes (P.D.&Co) during the late smallpox epidemic; and although some of the primary cases required one or two revaccinations, all were ultimately successful. In every respect the Vaccine was entirely satisfactory. There were no bad arms.—

S.E.Simmons, M.D., Norwalk, Ohio.

It's in the Virus!

Results like those of Dr. Simmons do not spring from chance or good fortune.

The Explanation lies in the medium used — its in the virus!

Our Aseptic Vaccine, as its name implies, is pure. It is active — It is safe.

Parke, Davis & Co.
Detroit, Mich — U.S.A.

SENILITY

is treated generously by Nature, and claims like treatment at the hands of Science. The stingy, parsimonious attentions that are paid to advanced life constitute an unpardonable transgression. Old age must be reckoned with as a disease, as a departure from order, a depravity of order. As Cicero said long ago, "We must make a stand against old age. Its faults must be atoned by activity. We must fight, as it were, against disease." There is no arrest of the on come of age, but the advances can be retarded. If we will but so receive it, senility is a neurosis. The bankruptcy that threatens, and destroys the credit of Life, affects primarily the nervous system. It is here that decay comes on; and it is here that the ministry of nutriment is sought out. The body, impaired by age, feels little impairment if nutritive and easily digested food is provided. Length of days has to do with strength of nerve, and strength of nerve with liberality of diet, suitably disposed. The degeneration of tissue is the main point to be borne in mind. The great matter is to put as far hence as may be the structural impairment of the nerves, and to repair if such impairment has entered the system. In order to maintain health and vigor, mere tonics will not be effective, and nothing short of palatable food will be adequate. It is therefore that McArthur's Chemically Pure Syrup of Hypophosphites is invariably found to produce a surprisingly beneficial effect upon the health of the aged. This is apparent in all disease conditions, and not alone in those which give name and place to neurotic conditions. The principal nerve-centers are nutrified, and increment of activity ensues, so that the impulses of healthful life are transmitted all through the organism. The nerve-centres thus stimulated send out powerful efferent currents of nerve force, and throw not only the ordinary but also the accessory tissues into energetic action, disposing of respiratory, assimilative, and other forms of embarrassment as they occur. The patient is relieved from all violent efforts for keeping up the functions of existence. In the words of an elderly practitioner who had taken the Syrup as the daily food of his three-score-and-ten years, "I thought I was getting on in life, but I find that I am getting on in living, instead." Be generous with the old, and the generosity will hinder that obsolescence which speaks so bitterly of diminished capacity and structural degeneracy.

Upon receipt of Forty-five cents in stamps, we shall be pleased to forward, express prepaid, to any physician, one regular bottle, one dollar size. Small sample and literature free.

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IF IN NEED
OF A RECONSTRUCTIVE, NERVE AND MUSCLE BUILDER, WHERE THERE IS ALSO A DEMAND FOR MORE AND BETTER FLESH,
CORD. OL. MORRHUAE COMP.
(HAGEE)
WILL MEET ALL REQUIREMENTS.

IT CONTAINS all the potent elements of cod liver oil, and has been thoroughly tested and fully endorsed by our most eminent physicians. It is no experiment to prescribe

HAGEE'S CORDIAL OF COD LIVER OIL

WITH HYPOPHOSPHITES OF LIME AND SODA

Dispensed in 16-ounce bottles by all Druggists

KATHARMON CHEMICAL CO., ST. LOUIS, MO.

Neoferrum
THE NEW IRON

MALTO-PEPTONATE OF IRON & MANGANESE with MALTINE
(ARSENICATED)

A NEUTRAL, organic, assimilable, non-constipating form of iron combined with the valuable nutrient and starch-converter, Maltine (attenuated with high-grade sherry), and a minute amount of absolutely pure Arsenious Acid.

A Palatable and Rational Specific for the treatment of Anaemia, Chlorosis, Blood Impoverishment arising from whatever cause, Malaria, etc.

Neoferrum is to be preferred to *mere solutions* of the Pepto-Manganate and other forms of Iron, because it contains sufficient Maltine to exercise a distinct *digestive action on starches,* and embodies *easily assimilated nutriment instead of valueless and perhaps irritating and otherwise contra-indicated material.*

Introduced only to the Medical Profession in accordance with a long established policy which has secured for the Maltine Preparations the universal regard and unqualified endorsement of the Medical Profession.

THE MALTINE COMPANY
BOROUGH OF BROOKLYN, NEW YORK.

WHEN THE STOMACH REFUSES

food and nourishment, when intestinal or gastric inflammation render the stomach entirely unavailable, or inadequate, try

BOVININE

per rectum. It will nourish and support, and aid any form of medication.

When collapse calls for ***instantaneous blood*** supply—try it by sub-cutaneous injection of one part to two of neutral salt solution, and note the prompt response, a response so much more efficient and powerful than that from blood dilution. If you are interested a postal will bring our scientific treatise on topical and internal administration, and reports of hundreds of clinical cases.

THE BOVININE CO.,
75 West Houston St., New York.

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AGURIN The Non-Irritating Diuretic.

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BROMIDIA IS A REST-MAKER FOR RESTLESSNESS. IT GIVES CONSISTENT NERVE REST. IT DOES NOT LESSEN THE SUPPLY OF BLOOD TO ANY ORGAN OF THE ECONOMY, AS THE BROMIDES ARE SURE TO DO. IT IS A HYPNOTIC.

FORMULA:--15 grains each Chloral Hydrate and Purified Brom. Pot. and 1-8 grain each Cen. Imp. Ext. Cannabis Ind. and Hyoscyamus to each fld. drachm.

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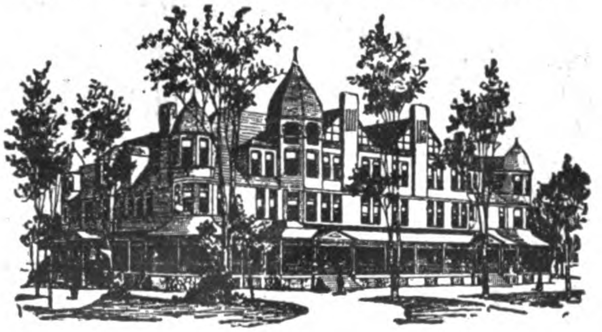
BATTLE & CO., CHEMISTS CORPORATION, **ST. LOUIS, MO., U.S.A.**

THE SANATORIUM,

HUDSON, WIS.

SAM C. JOHNSON, M. D., Medical Director.



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Every Appliance and Method used which is recognized in Legitimate Medicine including Turkish, Roman, and Electric, Medicated and Thermal Baths—also every form of Electricity, as well as Massage and Swedish Movements etc. All under the supervision of Experienced Physicans and Trained Nurses.

The institution is delightfully located with a long, wide veranda inclosed in the winter season in glassand s equipped with a modern convienieces, as Elevator, Electric light and Electric Bells. Large Parlors.

For terms address.

THE SANATORIUM.

AS The Successful Introduction

of a really meritorious remedy is immediately followed by the unwarranted and most damaging dissatisfaction of Imitations and Substitutions, which flood the market almost beyond the physician's comprehension, it therefore behooves us to kindly and particularly request not only the specification (Gude), but the prescribing ***of ORIGINAL BOTTLES by every physician*** who desires to employ in his treatment

Pepto-Mangan ("Gude")

which is the original and only true organic preparation of iron and manganese, and the source and foundation of all the exceptional and positive therapeutic merit experienced in this product.

Imitations with similar sounding names, but dissimilar in every other respect, **are mischievous enough,** but in nefariousness are yet unequal to substitution and the substitutor, against whom **the physician's only assurance is an *original bottle.***

GUDE'S PEPTO-MANGAN has, since its introduction to the Medical Profession of the World, always proved its superiority over other blood-making compounds, and furthermore will always substantiate all the statements so highly commending its value.

As this certainty in efficacy has won for this preparation the confidence and reliance of the physician, we, to protect you, your patients and ourselves against such conscienceless methods, earnestly ask the prescribing of ***original bottles*** only. This request, though seemingly of little importance, will be significant in view of the astounding knowledge that 75% of the manufacturers are not only offering but selling gallons and kegs of so called "Just as Good" iron mixtures, which have not undergone and dare not undergo either the scrutiny of the physician or examination by the chemist.

While there is only one Pepto-Mangan

which is never **supplied in** any form of package other than our
. . . **regular eleven-ounce hexagonal bottle,** . . .
you will readily surmise the intent of these imitation preparations which are wholly unknown to the Medical Profession, and agree with us in the importance of the above request.

Any one offering Pepto-Mangan in bulk form, either intentionally or unintentionally practises substitution; hence our solicitation for your co-operation against this harmful, unjustifiable, and inexcusable fraud.

M. J. BREITENBACH COMPANY,
53 WARREN STREET NEW YORK.

The success of the present-day treatment of nervous exhaustion, malnutrition and general debility is largely due to

GRAY'S
GLYCERINE
TONIC
COMP.

It has become the *Standard* Remedy.

THE PURDUE FREDERICK CO., No. 15 Murray St., New York.

A Useful Nerve Stimulant and Tonic.

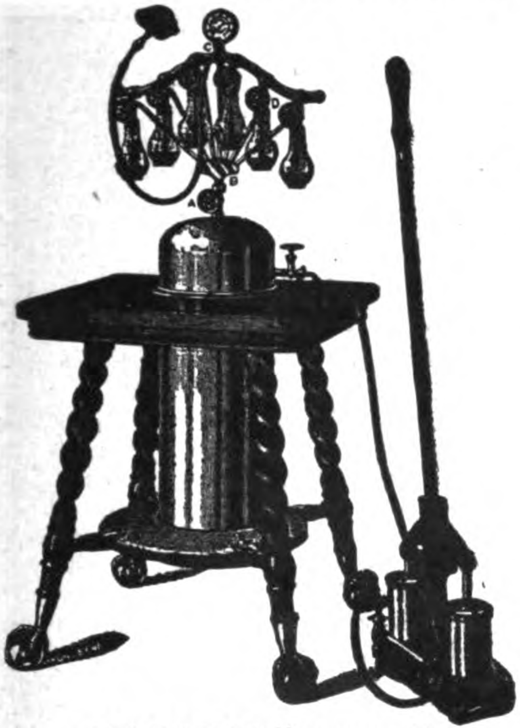
CELERINA is a powerful stimulant WITHOUT the depressing AFTER-EFFECTS of alcohol, caffeine, nitro-glycerine, etc. It is also a reliable Nerve Tonic. A pleasant exhilaration is experienced after a dose of one or more teaspoonfuls, and under its continued use a renewed capacity for mental and physical exertion results. It is indicated in all form of exhaustion, mental inertia and senile weakness.

DOSE: One or Two Teaspoonfuls Three Times a Day.

A Full-Sized Bottle Sent Free to Any
Physician Who Will Pay Express Charges.

Rio Chemical Co., New York.

THE EUREKA NEBULIZER



SIX BOTTLE "IMPROVED."

IT is the most perfect and desirable Nebulizer manufactured. With our seven years experience in the manufacturing of Nebulizing apparatus exclusively, we are in a position to guarantee to the physician the most practical and successful Multi-Nebulizer for the treatment of all diseases of the respiratory organs. The busy physician wants something that has been tried: the Eureka is used by thousands of physicians and gives universal satisfaction.

Write for illustrated and descriptive circulars showing the most elegant line of Compressed Air and Nebulizing Apparatus manufactured

Address,

THE EUREKA NEBULIZER,

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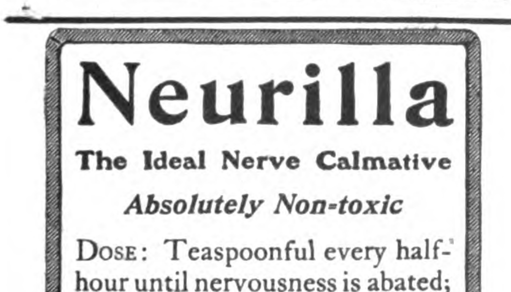
The Eureka Nebulizer (improved) I bought of you has given such entire satisfaction, that a must write you this unsolicited testimonial. I. is the most useful and practical apparatus I hav ever used in the treatment of catarrhal affections of the nose, throat aud ear. Every up-to date physician, be he specialist or general practitioner, should not hesitate to purchase one of these instruments.

J. T. HAMILTON, M. D., Kansas City, Mo.
Professor of Clinical Optics and Refraction.

"Indian Medical"=== The King of Spring Waters

An Absolutely Pure Product of Nature.



Indian Medical Spring Water has the unqualified endorsement of the medicol profession, and is recommended as a positive preventive of typhoid fever, if used exclusively, and as a cure for rheumatism, kidney disease, eczema and all of the allied diseases of the bladder and stomach. It acts especially upon the gastric juices, aiding the assimilation of food and producing new blood, which no medicine will do.

For further information and prices, call on or address.

INDIAN MEDICA SPRING WATER CO.

604 Masonic Temple, MINNEAPOLIS, MINN.

Neurilla

The Ideal Nerve Calmative

Absolutely Non-toxic

DOSE: Teaspoonful every half-hour until nervousness is abated; **then,** four times a day. Teething children: 10 to 20 drops.

DAD CHEMICAL CO., New York

When You want the news
Take a paper that
Publishes it, and
Publishes it first . .

In other words, take

The Minneapolis Journal

it to you all right yere, an' after you git it you'll all say it's the biggest nugget ever found in this yere camp.'

" 'What do you want us to do, parson?' asked one of the gang.

" 'I want you to come outen the woods back of this place an' listen to what I got to say to you. Come right along now while the sperit moves you. Tell all the rest on 'em. Scatter through the camp an' say that a man has come among you who'll distribute a treasure —a treasure not of this world, but of kingdom come.'

"Waal, the man had got such an influence outer 'em that they went round collectin' the people. Some come from curiosity; some because they had once got religion, an', havin' lost it, wanted to git it again; some because the men huntin' 'em axed 'em to. Leastaways it wasn't more'n half an hour before every man, woman an' child in the camp was in the woods waitin' to listen to the parson. When they was all there, the stranger stood up on a stump an' says to 'em:

" 'Gents, this yere woods is now consecrated to this yere holy pu'pose. It isn't meet to come inter a tample of the Lord with sich ornery things as 45 caliber revolvers or ten inch dirk knives. You're expected to come meek an' humble. Now, before the service begins I want all weapons deposited over there on that mound. Any man as keeps so much as a rusty pocketknife may expect eternal damnation.'

"The men that the parson cleaned out at poker was the first to move. Then the rest of the miners, seein' what had been done, or, moved by the holiness of the occasion, goes to the mound, unstraps their weapons an' throws 'em on the pile. When it was all done, the parson axed 'em:

" 'Has any man concluded to desecrate this place with weapons hid under his shirt? If so, that man will repent in sackcolth an' ashes.'

"He looked so searchin' that one man who had kep' his pocketknife wilted an' went out an' throwed it over.

" 'I'm glad that man's conscience,' said the parson, 'has forbid his committin' an unpardonable sin. Is there any other sneakin' sinner who's got a weapon?'

"Nobody else moved, an' the parson knowed they was cleaned out. Then, reachin' under his coattails, he drawed out two barkers an' addressed the meetin':

" 'Sence you're all unarmed an' I got the drop on you I would announce that the fust an' the last thing afore this meetin' is a contribution. All step up as I p'int you out an' deposit your valyables afore this yere stump.'

"Do you know, stranger, that rascal made every one on 'em walk up to the foot of the stump he was a-standin' on an' throw down what he had. There was a pile of things, some on 'em valyable, some on 'em no use, for the people was so frightened that they pitched over all they had. When the last one had contributed, the parson got down, an', still holdin' his barkers an' keepin' one eye on the congregation, picked out what he wanted. When he'd stuffed his pockets, he backed up on ter de stump an' pronounced a benediction.

" 'Galoots,' he said, 'I've gone through a multitude of suckers, but I never bled a stupider lot than you people of Nugget Camp.'

"Thar was one real religious man in the crowd, an' he spoke up an', lookin' at the bogus parson, said, quotin' Scripture:

" 'Fool! This night thy soul shall be required of thee.'

"He hadn't no sooner spoke them words than a rifle cracked from behind the man on the stump, an' he pitched headfo'most an' lay dead with a bullet through his head. Ole Ike Hardenburg, from over the divide, a-comin' into camp, had stumbled on the meetin' an' tuk in the situation.

"No, parson; reckon our people wouldn't listen to you."

Nevertheless I called a meeting and invited the men to bring their weapons. Before I left Nugget Camp I had scored a success.

TRUE ORGANIC IRON

—OR—

Sanguiform

OFFERED IN 14-OUNCE BOTTLES ONLY

A preparation of the blood of healthy warm-blooded animals, containing all of its normal constituents ascertained by careful examination and preserved to insure permanency in all climates.

Each ounce of Sanguiform contains 2.5 grs. Natural Organic Iron together with all the Albuminoids and Saline Constituents of one and one-quarter ounces of Normal Healthy Blood, rendered palatable by the addition of Aromatics.

As a tonic and reconstituent, Sanguiform has the advantage of being free from any irritant action, and it may be administered freely and continuously without causing any disturbance of the stomach or digestion. It may be successfully employed as a substitute or vehicle for the administration of Cod Liver Oil. Being composed of the material forming blood, it may properly take the place of such agents as the oils and other materials for the constructive metamorphosis of the body.

Sanguiform is indicated in the treatment of Anæmia, Chlorosis, Neurasthenia, Scrofula, Rickets, General Debility, Marasmus, Diseases of the Lungs and Chest, and as a nutrient tonic in the convalescence of all wasting diseases involving in any way an impoverishment of the blood.

SAMPLES AND LITERATURE WILL BE SUPPLIED TO PHYSICIANS ON APPLICATION

JOHN WYETH & BROTHER, Inc.

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Our Line of

Surgical Instruments

Was never more complete than at present, all up-to-date and strictly HIGH GRADE, and our prices are right.

See our new gynecological stirrup; easily attached to any table or bed rail—and only $5.00.

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Sixteenth annual session opens November 3, 1902, and closes May 30, 1903. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, including laboratory work. For further information address New Orleans Polyclinic, postoffice box 797, New Orleans, La.
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L. H. RUSHFORD, Manager.

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First. It is owned, edited and published by physicians to meet the requirements of physicians for up-to-date views and information concerning diseases and their treatment.

Second. It publishes papers of practical value by the best writers, educators, and practitioners of medicine and surgery of the twin cities, the Northwest and other parts of the country.

Third. It prints abstracts from articles of special note in medical journals of the best standards in medical literature.

Fourth. Its advertising is clean, and separate from the reading matter, and it provides all this at a moderate cost, one dollar for twelve numbers.

Fifth. It does not claim to be the only ethical medical journal of the Northwest.

A Flat Fact—

When it is susceptible of definite proof always carries more weight than any amount of argumentative theorizing.

We make the positive assertion
(and stand ready to prove it) that

Pepto-Mangan ("Gude")

actually **Builds Blood** in cases of

Anæmia, Chlorosis, Rickets, Bright's Disease, Neurasthenia, Etc.

It increases the number of **red corpuscles** and the percentage of **hæmoglobin.** This has been and can be amply demonstrated by the use of scientific instruments of precision (hæmocytometer, hæmoglobinometer, etc.)

We can send you hosts of case reports, "blood counts," hæmoglobin-estimates, etc., as confirmatory evidence. If you want to prove it yourself, send for samples.

**To assure proper filling of prescriptions,
order Pepto-Mangan "Gude" in original bottles (℥ xi).
It's never sold in bulk.**

M. J. BREITENBACH COMPANY,

LABORATORY,
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AMERICAN
CONTINENT

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5 SECONDS BY THE WATCH

OUR HYPODERMATIC TABLETS
DISSOLVE COMPLETELY, IN FIVE SECONDS BY THE WATCH

Immediate action!—that is what the physician expects in a hypodermatic tablet. It is what he should ***demand.***

The tablet which meets this requirement—the tablet which can be relied upon in an emergency—must have the merit of ***quick and complete solubility.***

It is not sufficient that it fly to pieces when thrown into water. Many hypodermatic tablets do that, their undissolved particles settling to the bottom. This is mere disintegration—***not solution.***

Ours ***dissolve***—dissolve ***completely***—in five seconds.

Drop one of them into a syringe half filled with luke-warm water, shake vigorously, and note results. ***Try it!***

Parke, Davis & Co.'s Hypodermatic Tablets have never failed in an emergency. Prompt, efficient action follows their administration —***always.*** There is never any delay, never any uncertainty.

Use them!

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LIQUOR SALI-IODIDES—Colchicin, 1-20 grain; Phytoloccin, 1-10 grain; Solanin, 1-3 grain; Soda Salicylate, 10 grains; Iodic Acid, equal to 7-32 grains; Aromatic Cordial. Dose, 1 to 2 drams in water. 8 oz. bottle, $1.00.

A powerful alternative and resolvent, glandular and hepatic stimulant, and succedaneum to the iodides. Indicated in all conditions dependent upon perverted tissue metabolism; in lymphatic engorgements and functional visceral disturbances; in lingering rheumatic pains which are "worse at night." Bone, periosteal and visceral symptoms of late syphilis; for the removal of all inflammatory, plastic and gouty deposits.

A remedy in sciatica, megrim, neuralgias, lumbago and muscular pains; the gouty and rheumatic diathesis; acute and chronic rheumatism and gout; chronic eczema and psoriasis, and all dermic disorders in which there is underlying blood taint.

An hepatic stimulant increasing the quantity and fluidity of the bile. Relieves hepatic and intestinal torpor; does not cause the unpleasant gastric symptoms of potassium iodide.

THREE CHLORIDES (HENRY'S)

LIQUOR FERRISENIC—Each dram contains: Proto-Chlor, Iron, 1-8 grain; Bi-Chlor, Mercury, 1-128 grain; Chloride Arsenic, 1-280 grain; Calisaya. Dose, 1 to 2 drams, 12-oz. bottle, $1.00.

An oxygen-carrying ferruginous preparation, suitable for prolonged treatment of children, adults, and the aged. Indicated in anemia and bodily weakness, convalescence from acute diseases and surgical operations; boys and girls at the age of puberty, and the climacteric period in women. In children with chorea, rickets, or who are backward in development, or in whom there exists an aversion to meats and fats. Prolonged administration never causes "iron headache."

As an adjuvant for potassium iodide, the undersirable manifestation known as iodism can be removed.

Stimulant to the peptic and hydrochloric glandular system of the stomach, especially serviceable in the impaired appetite, nausea, vomiting and other gastric symptoms of alcoholic subjects.

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LIQUOR LITHIUM MAIZENATE—Nascent Chemic Union of Maizenic Acid—from Green Corn Silk—with Lithium, forming Maizenate-Lithium. Two grains to dram. Dose 1 to 2 drams. 8-oz. bottle, $1.00.

A genito-urinary sedative, an active diuretic; solvent and flush; indicated for the relief and prevention of renal colic: a sedative in the acute stages of gonorrhea, systitis and epididymitis: in dropsical effusions due to enfeebled heart or to renal diseases. As a solvent in the varied manifestations of gout, goutiness and neurotic lithemia, periodical migrainous headache, epigastric oppression, cardiac palpitation, irregular, weak or intermittent pulse: irritability, moodiness, insomnia and other nervous symptoms of uric-acidemia. Decidedly better, more economical, extensive in action and definite in results, than mineral waters.

Those cases of irritable heart, irregular or intermittent pulse so frequently met with by insurance examiners, and found to be due to excess of uric acid, are special indications for Maizo-Lithium.

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Preparation—Par Excellence

"Fellows'
Syrup of Hypophosphites"

CONTAINS

Hypophosphites of

Iron,	Lime,
Quinine,	Manganese
Strychnine,	Potash.

Each fluid drachm contains Hypophosphite of Strychnine equal to 1-64th grain of pure Strychnine.

Offers Special Advantages

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Dr. Milner Fothergill wrote: "It (Fellows' Hypophosphites) is a good all-round tonic, specially indicated where there is NERVOUS EXHAUSTION."

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Medical letters may be addressed to

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Not a Stimulant But a FOOD

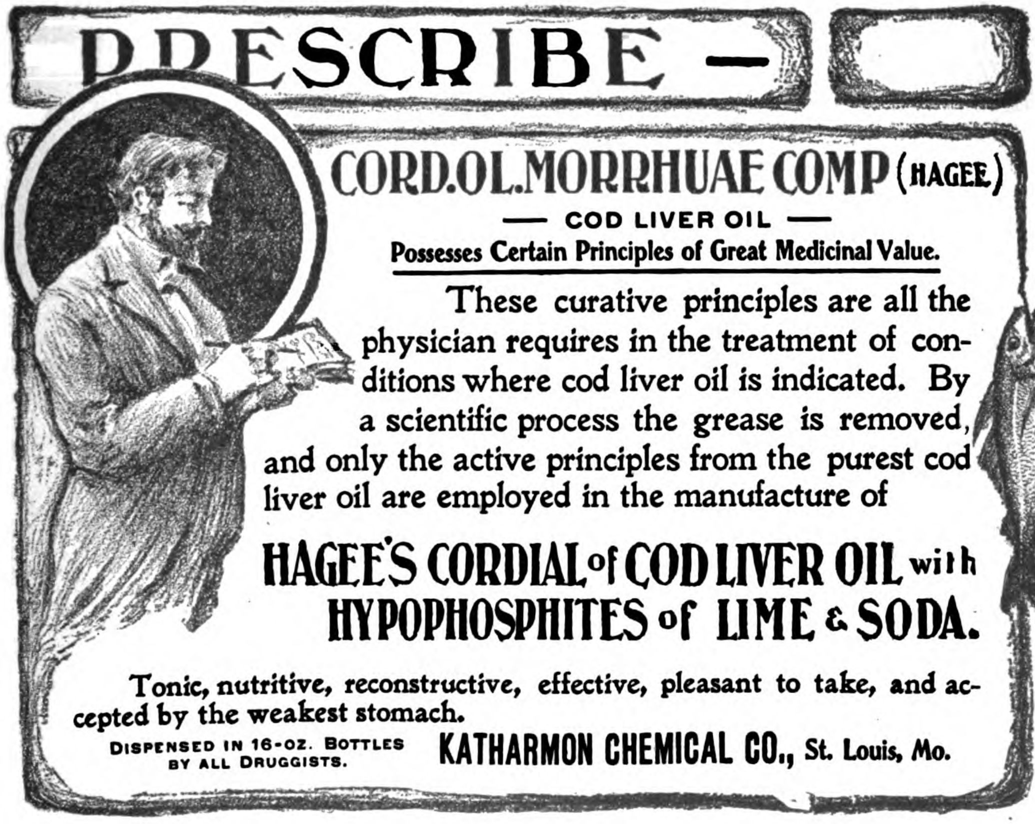
SLOW BUT SURE.

A Most Reasonable
Tissue Builder and Reconstructive,
Prepared according to the formula of Dr. Churchill.

Quick, temporary results not to be expected, but slow and permanent improvement will surely follow a generous treatment with McArthur's Syrup, in which phosphorus, lime and soda are incorporated with pure syrup in their most assimilable form, hypophosphites.

☞ Upon receipt of forty-five cents in stamps, we shall be pleased to forward, express prepaid, one regular bottle, one dollar size. Small sample and literature free.

The McArthur Hypophosphite Co., Ansonia, Conn.



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Possesses Certain Principles of Great Medicinal Value.

These curative principles are all the physician requires in the treatment of conditions where cod liver oil is indicated. By a scientific process the grease is removed, and only the active principles from the purest cod liver oil are employed in the manufacture of

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Tonic, nutritive, reconstructive, effective, pleasant to take, and accepted by the weakest stomach.

DISPENSED IN 16-OZ. BOTTLES BY ALL DRUGGISTS.

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Preparation—Par Excellence

"Fellows' Syrup of Hypophosphites"

CONTAINS

Hypophosphites of

Iron,	Lime,
Quinine,	Manganese
Strychnine,	Potash.

Each fluid drachm contains Hypophosphite of S
equal to 1-64th grain of pure Strychnine.

Offers Special Advantages

in Anaemia, Bronchitis, Phthisis, Influenza, N
and during Convalescence after exhausti

Dr. Milner Fothergill wrote: "It (Fellows' Hypophosph
tonic, specially indicated where there is NERVOUS EXH

SPECIAL NOT llows' Hypophos
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LITERATURE OF

McArthur's Syrup

Not a Stimulant But a FOOD

Hypophosphites

A Most Reasonable

Quick

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paid, one regular bottle

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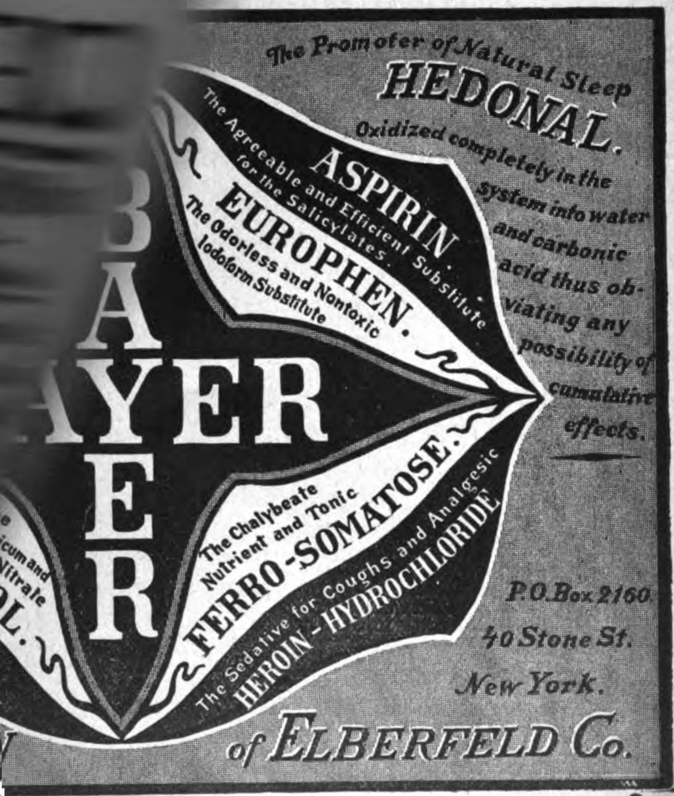

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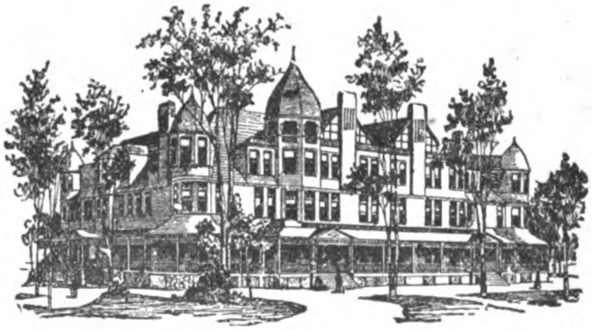

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Zinc Phosphide - - gr. 1-30 with Capsicum and Aromatic Powder.

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The Natural Food Co.'s Editorial Page.

Physiological Facts and Dietetic Deductions.

Life is maintained by a continuous process of oxidation, or combustion, producing heat and energy. But the material substance of life is consumed, or destroyed, by this very process of oxidation, or combustion, which maintains it. And to supply more of that substance burnt up in the production of vital force, FOOD is required.

Living consumes the organism in which life is manifest, and substance is destroyed by the vital processes producing such manifestation. In order that health and vigor may be possible, the "building of dead FOOD up into living matter, and the breaking down of living matter into dead waste," must operate with about equal intensity. The constructive and the destructive processes must be maintained in a state of metabolic equilibrium—assimilation and decomposition must reciprocally balance. Thus we see that there can be no "action" without "reaction;" and it is this "reaction" which we must provide for. To reduce the physiological principle, or law, to simpler terms of expression: Functional activity wastes the body, and to renew the body, that waste must be repaired. We must keep continually re-building the living organism by replacing the dead, worn-out matter with new, fresh material. The strength of the body depends upon the nourishment in its food; for, FOOD, ALONE, CONTAINS THE POWERS OF LIFE.

* * *

These are the "facts"; namely, that the life of the body is derived from the vital elements in its FOOD, and also, that nothing else but its FOOD can contribute to that life: now, what are the "deductions"? The DIET that is best suited to sustain human life is one composed of FOOD possessing the greatest amount of NOURISHMENT in such a form, or condition, as renders it capable of being most easily appropriated by the physical organism and converted into substance like unto the organism itself In other words, the most highly nutritious, and therefore, the most economic, DIET is one which consists of the greatest amount of FOOD that is rich in DIGESTIBLE and ASSIMILABLE NOURISHMENT.

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is the sneak thief
of all diseases."

It steals on insidiously, frequently carrying in its wake the beginnings of disease of more serious import.

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by furnishing the blood with an immediately absorbable combination of **Organic Iron and Manganese,** increases the oxygen and hæmoglobin carrying power of the red corpuscles and thus nourishes all the tissues of the body. It should be employed in cases of

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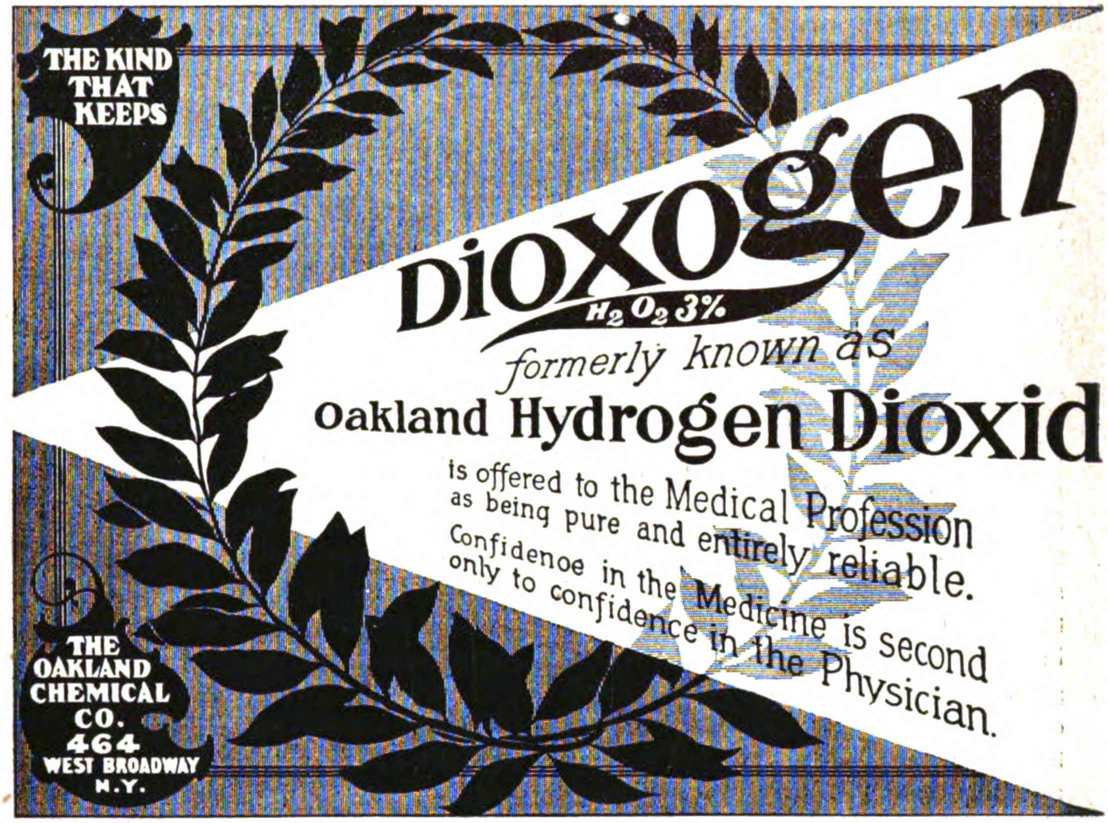

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For Colds, Biliousness, Dengue and Malaria

NO DRUG HABIT INDUCED.

THE ANTIKAMNIA CHEMICAL COMPANY
St. Louis, U. S. A.

OBSERVATIONS ON THE THERAPEUTIC ACTION OF ASPIRIN.

By Dr. Alfred Brunner, Physician to the City Hospital of Triest. Although we have in the salicylates a genuine specific for the treatment of acute articular rheumatism, there occur, especially during the winter and spring, a considerable number of cases of inflammatory rheumatism in which, owing to the complete intolerance of the patients against all salicylic acid preparations, no matter in what form administered, our efforts are frustrated, and we find ourselves compelled to resort to antipyretics for the fever and analgesics for the pains. We therefore gladly welcome, in aspirin, a salicylic acid derivative which is well tolerated almost without exception, even in conditions of weakened digestive organs and in the case of very delicate children. I say almost without exception, because during the administration of aspirin in 138 cases during a total use of about 2,859 grams, I encountered but one case, that of a girl, 9 years old, in which, owing to intolerance, the drug had to be discontinued.

In our division of the hospital it had been our custom to employ sodium salicylate in a mixture with tincture of gentian and peppermint water by mouth or to give the drug in an enema, or to use salicylic acid in wafers. Although the salicylate was given in a very dilute form we have often had an opportunity of observing its irritating effect upon the gastric mucous membrane, which manifests itself in vomiting and gastralgia. The more rational application was in an enema, but even in this form we sometimes noticed intestinal irritation, especially if ten or fifteen drops of the tincture of opium were not added. If salicylic acid was used it gave rise especially to severe tinnitus and frequently to vertigo and even delirium after large doses. In many instances we were compelled to resort to other salicylic acid derivatives, particularly to salol, salophen, or salipyrin. In aspirin we now have an extremely efficient salicylic acid preparation which has the advantage of being decomposed only in the alkaline fluids of the intestine, and of being well tolerated by the stomach.

Among the 138 cases in which aspirin was used we would mention above all 17 cases of acute articular rheumatism. As a rule the patient received 15 grains aspirin every two hours in a wafer, followed by a lemonade. This dosage was continued until the fever had entirely ceased or the temperature was no longer above 35.5°C. For a number of days aspirin was given in daily doses of 45 grains. Slight uncomplicated cases of articular rheumatism were sometimes cured in 5 to 7 days, the swelling of the joints diminishing considerably during the first 24 hours, while the pains rapidly subsided. In severe cases the aspirin treatment had to be continued for a long time. Among these 17 cases, six occurred in women and 11 in men, 10 being of mild and 7 of severe character. In two of the latter endocarditis and in one pericarditis also existed. In all the patients the drug acted at once upon the temperature, and the pains usually disappeared after the first two doses.

We usually administered the remedy in the evening, 15 grains being given at intervals of an hour. Its administration was followed by marked sweating, and the patients enjoyed a quiet painless night. In connection with the medicinal treatment local applications were of course made to the affected joints. The following case illustrates the action of aspirin particularly well.

Z. A., 27 years old, was admitted April 17, 1900. Since two days the left knee-joint and the right ankle had been markedly swollen, red, and painful. On the day of admission the temperature

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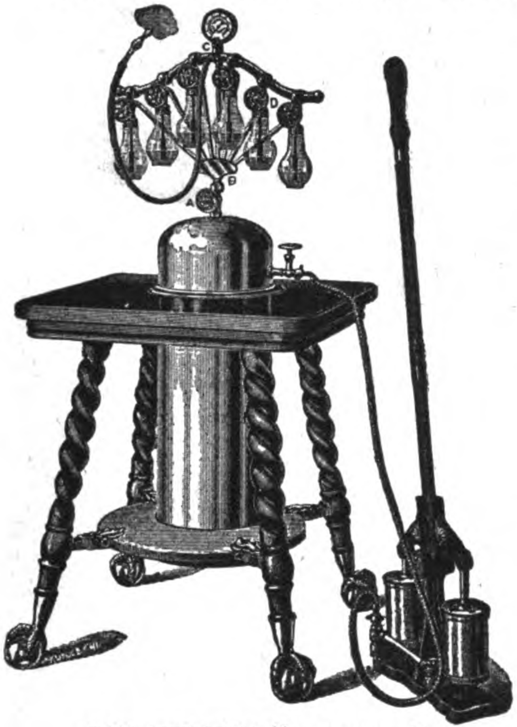

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Write for illustrated and descriptive circulars showing the most elegant line of Compressed Air and Nebulizing Apparatus manufactured.

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Specula, Graves or Sims, regulrr price $1.25	.90
Rubber Gloves, Miller or Faultless, warranted $1.25, our price	.75
Hypodermic Syringes, all metal, perfect $1.00, our price	.40
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MINNEAPOLIS, MINN.

was 39.2°C. All sorts of salicylic acid preparations were employed during forty days, without any success. Gradually more and more joints became affected, so that the patient was in a wretched condition, and hypodermics of morphine were necessary in order to afford him some relief from his sufferings. After the first administration of aspirin in the customary dose of 15 grains every two hours the patient felt considerably better, and was able to pass a restful night without requiring the injections. In the course of another five days during which aspirin was given the swellings and pains had completely subsided, and after a further period of 17 days the patient was discharged cured.

Aspirin was also employed in eight cases of subacute articular rheumatism or recurrences in previously treated cases, and here it proved equally successful. In this form of rheumatism its analgesic influence is especially noteworthy. The same is true of 21 cases of chronic articular rheumatism. The aspirin was employed especially in those in which severe pains were present, and with brilliant results. In five cases of acute muscular rheumatism it was likewise efficient, while in three of gonorrheal urethritis it had no influence whatever upon the articular condition. Aspirin was also very serviceable in four cases of erythema nodosum, this very painful affection being cured within a few days. The cutaneous infiltrations rapidly subsided; the episcleritis existing in one case disappeared at once after the use of the drug. A very prominent part is played by aspirin in the rheumatic form of influenza, and in the so-called rheumatic fever. During an epidemic prevailing in Triest 51 cases of influenza and rheumatic fever were treated. In the milder forms especially it was found possible to abort the disease by the rational administration of aspirin, as we often had occasion to witness. The following will serve as an illustration.

On one evening a patient with a high fever was admitted with a history of having suffered since the morning from marked weakness, violent pains in the limbs, headache and lassitude. He received 15 grains of aspirin every hour until the sweating ensued. In the night he perspired, and on the following day had a temperature of only 36.5°, which in the evening rose somewhat. For two or three days more aspirin 45 grains was given daily, and in three or four days he had completely recovered.

Pains in the joints and muscles were promptly relieved by the use of the drug in this manner. I would mention here that even patients with cardiac lesions can take aspirin without any risk both in influenza as well as in diseases of the joints. In influenza, however, it is useful in these cardiac cases to combine aspirin with a little caffeine according to the following formula: Aspirin, 8 grains; caffeine sodisbenzoate, 1 grain; or we order aspirin 8 grains, pulv. digitalis 1-6 grain.

Equally satisfactory results were obtained in neuralgic and neuritic affections. In five cases of acute and subacute neuritis a considerable reduction of the pains was produced. One patient with alcoholic neuritis, who suffered with atrocious pains in both legs at night, was able to sleep the entire night after the administration of aspirin 15 grains.

That aspirin can be taken without any unpleasant sequelae for some time is shown by this case, since this patient took the remedy daily for five months. The drug was administered with excellent results in four cases of neuralgia following influenza. In this condition it is most useful to administer one dose of 15 grains at the beginning of the pains, the effect being manifested almost always with great certainty. A very favorable

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A Scientific Blending of True Santal and Saw Palmetto in a Pleasant Aromatic Vehicle.

A Vitalizing Tonic to the Reproductive System.

SPECIALLY VALUABLE IN
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INDISPENSABLE in the treatment of NERVOUSNESS.

Dose: teaspoonful every hour, or in bad cases every half hour **until nervousness** is **abated, then,** four times a day.—Teething Children:—5 to 20 drops as indicated.

Neurilla contains the essential active principles of scutellaria and aromatics.

DAD CHEMICAL CO., New York and Paris.

effect was also noticed in five cases of migraine and cephalagia after influenza, the pains disappearing at once after its administration.

Furthermore, five cases of exudative pleurisy were treated. Here aspirin acted very favorably upon the pains, while the pleuritic effusion was not influenced. Better results were obtained in two cases of dry pleurisy, in which the pains entirely subsided. It is advisable therefore to prescribe aspirin for all cases of dry pleurisy, but only for the relief of the pains in the exudative form. Five cases of sciatica were improved under the use of aspirin. If the well-known lancinating pains of sciatica occur at night immediate relief can be effected with 15 grains, although a cure of the disease could not be obtained.

The same decided analgesic action of aspirin was manifested in gouty articular affections, while it was also given with good success for the lancinating pains of tabes.

On the ground of the cases treated I am led to regard aspirin as a complete substitute for the salicylate of sodium and salicylic acid, through the use of which the objectionable features of these preparations, such as tinnitus, vertigo, and gastralgia, can be entirely avoided. Aspirin is of great value in acute and chronic articular rheumatism and in erythema nodosum and in dry pleurisy, in rheumatic fever as well as in neuralgias, neuritis, and cephalagias following influenza, it is a vertible specific, and constitutes an important acquisition to the list of remedies for these diseases.

Klin. Therap. Woch., No. 44, 1900.

INCONTINENCE OF URINE IN A LITTLE BOY. I used Sanmetto in a case of incontinence of urine in my little boy. The bottle seemed to help him, and I continued the Sanmetto until he had taken four bottles. I thought he was cured, and discontinued the medicine for two months. Now there is a slight return of the trouble. Will commence the Sanmetto again—think it will effect a cure.

D. B. CAMPBELL, M. D.
Old Monroe, Mo.

PRESCRIBED DAILY. Regarding Pepto-Mangan (Gude), it affords me much pleasure to inform you that I prescribe your preparation almost daily. It combines palatability, which is of especial importance in pediatric practice, with most remarkably prompt efficiency.

DR. RUEDELL.
Rhaunen, August 16, 1901.

"HER FIRST PICTURE BOOK." The publishers of Medical Dial acknowledge the receipt of a very handsome reproduction of a painting in water colors by Miss Helen Hyde, of California, which was on exhibition at the Paris exposition, from the Antikamnia Chemical Co., St. Louis. On the back of the card is a convenient calendar for the year 1902. It makes a very pretty mantel piece.

A DRESSING FOR ABDOMINAL WOUNDS. Professor R. T. Morris, of New York, whose contributions on abdominal surgery have been of so much value, has for many years made extensive use of aristol in the dressing of abdominal wounds. In his lectures on appendicitis he states that he has replaced iodoform by aristol, which is similar in its action, but is preferable "because it adheres to the tissues much more tenaciously, because it seldom if ever produces any toxic effects, and because it smells better." He believes that while aristol does not act directly as an antiseptic it quickly forms with lymph a thin, protecting coagulum, which is almost impenetrable to bacteria, the free iodine which is given off destroying the existing ptomaines. He considers aristol of the utmost importance in closing tissue planes against infiltration from a wound. Aside from its use as a dressing to the external wound he has found this drug of great service in preventing secondary peritoneal adhesions. Other very prominent surgeons, as for instance, Professors Tuttle and De Garmo, have been equally strong advocates of aristol in abdominal surgery, and it is of interest to note that it was recently used in the dressing of the late President McKinley's wound (American Journal of the Medical Sciences). The special advantages of aristol for the treatment of wounds are its remarkable cicatrizing property, its freedom from irritation, and its analgesic action.

INCONTINENCE OF URINE. I have used Sanmetto in a case of incontinence of urine, in a child of seven years of age, with marked relief.

ROSCO HILL, M. D.
Epsom, N. H.

THE ANTIKAMNIA CHEMICAL COMPANY'S NEW LABORATORY. Frank A. Ruf, president and treasurer of The Antikamnia Chemical Company has just purchased a lot 80x 109 feet, on the northwest corner of 22nd and Pine streets, for $20,000.00 cash, on which his company will begin the erection, early in spring, of a new "Antikamnia Laboratory," five stories high, covering the entire lot. The improvements will cost about $45,000.00 irrespective of the laboratory apparatus and appliances which will be of most approved pattern, from Darmstadt, Germany. The offices and various departments will be fitted with all modern conveniences, making the whole plant one of the most complete Specialty Laboratories in the United States.

The Antikamnia Chemical Company is one of America's, if not ot the world's best known pharaceutical concerns and justly so. Energy, enterprise and push, backed up by the judicious and liberal use of printer's ink, in keeping their line of preparations in touch with the medical profession, from one end of the universe to the other, have made it so.

MOST VALUABLE FERRUGINOUS PREPARATION. I have employed the Pepto-Mangan (Gude) in a case of marked secondary anæmia with profuse gastro-intestinal hemorrhages due to an ulcer of the stomach, with most excellent results. The patient, an extremely weak woman who was somewhat disinclined to take any kind of medicine, praised within a short time the very agreeable taste of the preparation, and her appetite and condition of nutrition improved very rapidly, so that at present she exhibits a very healthy appearance. Pepto-Mangan has been regularly continued in her case.

According to my other experiences I am warranted in concluding that your Pepto-Mangan, owing to its agreeable taste and ready digestibility even in the presence of impaired gastric function, belongs to our most valuable ferruginous preparations.

DR. AUG. HAMMER,
Medical Councillor; City Phys.
Bathing Establishment at Langerberg, near Marienbad, Bohemia, August 21, 1901.

INCONTINECE OF URINE IN A YOUNG GIRL. I prescribed Sanmetto in the case of a young girl with incontinence of urine, and she continued the use of the preparation until relieved.

I. C. WHITEHEAD, M. D.
Hackensack, N. J.

ANTIKAMNIA AND HEROIN TABLETS IN PREVALENT GRIPPAL CONDITIONS. Thos. G. Rainey, M. D., L. R. C. P., Resident Physician, British Medical Institute, Atlanta, Ga., in a recent article states, that the comparatively new combination of drugs, antikamnia and heroin tablets, which has been so largely used for the control of cough, is also being successfully employed, to a large extent, in the treatment of nearly all affections of the respiratory tract, which are accompanied by dyspnoea and spasm, namely: Asthma, bronchitis, laryngitis, pneumonia, phthisis, whooping cough, hay fever, la grippe, etc. In cases in which the patients were suffering from the severe attendant pain of these diseases, it was found that this combination acted most satisfactorily. Each tablet contains five grains of antikamnia and one-twelfth grain heroin hydrochloride. One tablet was followed by a rapid diminution of pain, and after the third tablet the pain entirely disappeared. In treating the affections enumerated above, the dose is one tablet every two, three or four hours according to indication.

IN NOCTURNAL ENURESES IN CHILDREN. I have used Sanmetto, and can speak in the highest terms of its efficacy in urinary affections, and particularly in bed wetting of earlier life. I assuredly will use Sanmetto where I desire good results.

C. M. FAGER, M. D.
Harrisburg, Pa.

LOCAL ANESTHESIA FOR THRUST OF HYPODEMRIC NEEDLE. To prevent pain when inserting a hypodermic needle, the spot where the needle is to enter is touched with a toothpick dipped in strong carbolic acid; a white spot immediately appears (due to the coagulation of the albumin in the tissues). Shortly after perfect anethesia of the spot is manifest and the hypodermic needle can be pushed through the skin without pain at this point, and infiltration of the tissues begun. If a large area is to be injected, several spots are marked in the same way for insertion of the needle.—N. Y. Medical Times.

SHE'S A BIRD. An exchange says that the wife of a farmer back in the valley has been married three times. Her maiden name was Partridge, her first husband was named Robin, the second Sparrow, and the present one is Quayles, and they live in Jay township. There are two young Robins, one Sparrow and two little Quayles. One may also be forgiven for suggesting that the woman was a "bird," and that the editor, whose identity is lost, is undoubtedly a Lyrebird.

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